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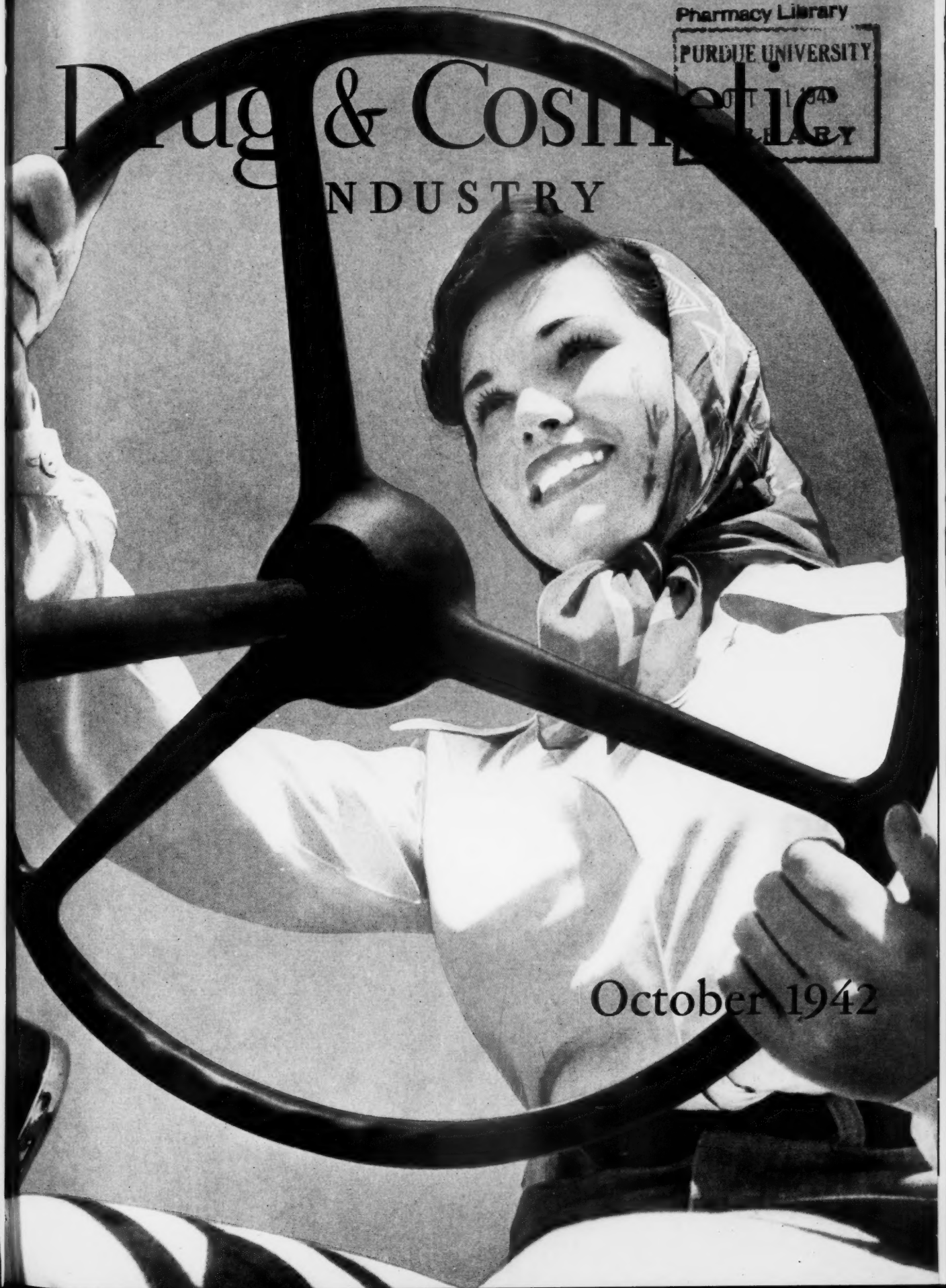
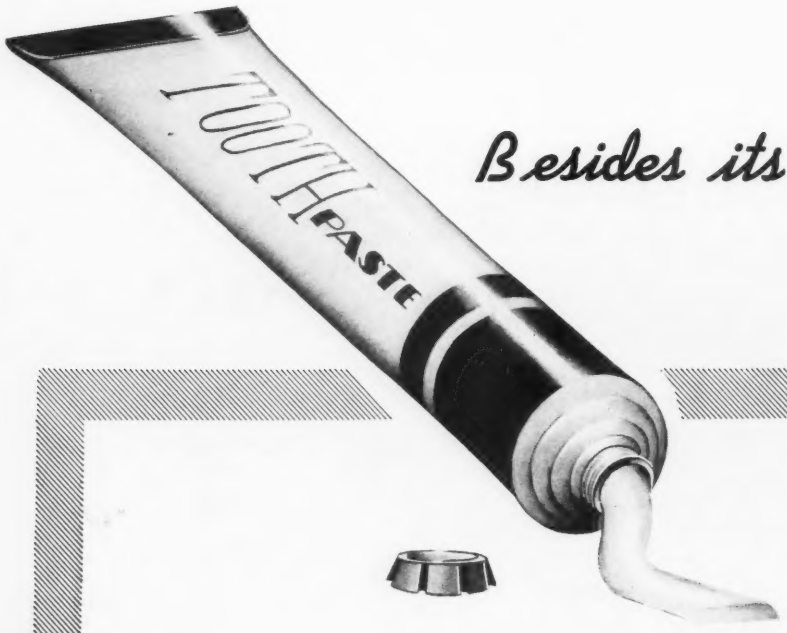
Drug & Cosmetic INDUSTRY



October 1942

WHAT'S IN A GOOD DENTIFRICE ?



Besides its flavor

One of the important ingredients in most every popular tooth paste is Snow Top Precipitated Chalk. This is so because, through the years, this American Precipitated Chalk has proved itself to be an absolutely non-abrasive polishing agent, which does the work safely and efficiently. Other important characteristics are: high chemical and physical purity, neutral character and extreme whiteness. Snow Top Precipitated Chalks have for many years been accepted by the American Dental Association as an Accepted Dental Remedy.

Snow Top is also used in Face Powders, Antacid Tablets, Table Salt, Cigarette Paper, Paints and Enamels, Rubber, etc. Write for a copy of "Precipitated Chalk for American Industry."

SNOW TOP

INDUSTRIAL CHEMICAL SALES

DIVISION WEST VIRGINIA PULP & PAPER COMPANY

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NEW YORK CITY

35 E. WACKER DRIVE
CHICAGO, ILLINOIS

748 PUBLIC LEDGER BLDG.
PHILADELPHIA, PA.

844 LEADER BLDG.
CLEVELAND, OHIO.

BETTER GLASS IS BORN HERE

...because this man is never satisfied

THIS is Dr. Robinson. He is testing a sample of glass in a machine called a viscosimeter. It's a complicated, precise mechanism, one that Dr. Robinson understands perfectly because he designed parts of it himself. It tells him things that have enabled Armstrong to make far better glass than ever before.

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This constant urge to improve means better glassware for you. It is just as important to you as the modern precision machinery in Armstrong's plants, just as vital as the skill and experience of the men who run it. The urge to improve has made—and kept—Armstrong's Glass the top-quality glass.

Armstrong's lines of glassware are complete and supplemented by a wide range of closures to meet your glass packaging needs. Write for complete details. Armstrong Cork Company, Glass and Closure Division, 906 Arch Street, Lancaster, Pennsylvania.

ARMSTRONG'S GLASS

and **ARMSTRONG'S CLOSURES**

Drug & Cosmetic INDUSTRY

OCTOBER 1942

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KEEPING POSTED

Drug and Cosmetics Section

THE new set-up of control of the products of this industry in the WPB has resulted in the establishment of the Drug and Cosmetics Section of the Chemical Branch of the WPB. This means that control over production of drugs and pharmaceuticals, which was formerly in the Health Supplies Branch of the WPB, has been transferred to this new section which is part of the Chemicals Branch. Also the Toiletries and Cosmetic Branch of the WPB has been abolished, and this control has also been lodged in this new section of the Chemicals Branch. The Health Supplies Branch, under the direction of Francis M. Shields, continues to function, but now it has control only over health supplies other than drugs and pharmaceuticals, such as hospital supplies, surgical dressings, and so forth.

The Drug and Cosmetic Section is made up of the same personnel as exercised control of drugs in the Health Supplies Branch, and as constituted the Toiletries and Cosmetic Branch. Fred J. Stock is Chief of the new section, and C. A. Willard is Deputy Chief. Mr. Willard formerly was chief of the Toiletries and Cosmetic Branch.

Consultants who are still in the section are Floyd Thayer, formerly of Abbott Laboratories; Dr. A. B. Pacini, formerly of Oxzyn Company, John Williams, formerly of Allied Products, and Dr. Dan Dahle, of the Food and Drug Administration. The Unit Chiefs of the section are: J. T. Batson in charge of Biologicals and Medical Chemicals Unit, Turner F. Currens in charge of Botanicals and Imports Unit, Mark Merrell in charge of Vitamins and Agar Unit, and Robert Blair in charge of Cosmetics Unit.

In addition, the new section has retained Paul Cramer and Dorothy Cocks on the staff of Research and Statistics Unit of this new section. Mr. Cramer was associated for twenty years with the research and analysis division of the Campbell-Ewald Advertising Agency in Detroit. Miss Cocks is advertising manager of Lehn & Fink Products Corporation. Dr. John N. O'Donnell is Chief of this Research and Statistical Unit, and studies of the requirements picture in the field will be instituted, particularly with regard to the consumption of critical materials as ingredients of, or in the packaging of cosmetics.

Changes in WPB Action

THE transfer of the control of drugs and pharmaceuticals and cosmetics to the Chemical Branch of WPB is expected to bring more rapid and more intelligent action on restriction of these products with reference to the raw materials used in them. While the original cosmetic limitation order was apparently drawn with an eye to both the essentiality of various cosmetics together with an eye to the raw materials which they employ, the new set-up indicates much more emphasis on the raw material angle of limitation.

The present and future limitations on production of cosmetics and the amount of raw materials that can be consumed in them has started an intense drive on the part of leading manufacturers to buy up the weaker manufacturers. Thus if a large manufacturer is restricted in his quantity and units of certain cosmetics, plus a sharp restriction on his alcohol consumption, he can remove these restrictions by buying out another company and then having this newly acquired company manufacture for him. There is nothing in the cosmetic limitation order that prohibits a manufacturer from changing the name of his products. Therefore, a smaller company's quota can be used to supplement the quantities of any brands which the larger manufacturer markets. Not only are these companies being purchased because they make the same type of products, but they are also being bought if they make products that contain large amounts of alcohol.

Some indication of the extent to which regulation of industry can go in the present emergency is given in the action being taken on the petroleum industry in order to ship oil into the East, particularly New England. Petroleum producers are being ordered not only to make common use of their terminals and distribution facilities, but also to make purchases, exchanges, or loans of petroleum and petroleum products. This means that so far as petroleum products in the East are concerned, they will probably all be alike to a great extent.

OPA Defines Medical Supplies

THE attitude of the OPA on the question of what drugs or medicines are essential to civilian welfare is indicated by an opinion on the question of gasoline supplies, this opinion being transmitted to the field offices of OPA for their guidance. The opinion follows:

"Re Gasoline Ration Order 5A. The term 'medical supplies' under Section 506 (m) is defined to include drugs and compounds recognized by the United States Pharmacopoeia, National Formulary or the New and Non-Official Remedies (issued by Council of Pharmacy and Chemistry, American Medical Association); also appliances, instruments, and equipment used in diagnosing, treating or preventing illness, disease, injury, or disability, including medicines and medical appliances for the treatment of animals. For example, soaps, beauty aids, dentifrices, charms, or amulets, are not included within the definition, but such commodities as antitoxins, X-ray equipment, trusses, and hearing aids for the deaf are included.

"Proof that a salesman is engaged in sale of medical supplies is not sufficient to establish eligibility. He must also prove that it is essential to war effort that marketing be done by salesmen. To fulfill this requirement it is necessary to show two things: first, that supply itself is essential to war effort, that is, that unavailability of supply would

jeopardize health or physical welfare of the members of the community, or, in animals, might cause disease dangerous to humans, or serious loss of livestock or produce. Examples of such supplies are vaccines, sulfa compounds, hearing aids, crutches, braces, surgical instruments.

"Second, that distribution cannot adequately be accomplished without services of salesmen, in other words, that salesmen's services are needed to make known existence of new commodity, or to adjust a device to personal requirements of user, or to give special instructions in use or if salesmen in a sparsely settled area engages in delivery of commodities sold and other means of distribution are inadequate, distribution by salesmen not normally required in case of medical supplies, use or application of which requires no personal instruction or demonstration, for example, bandages, antiseptics, disinfectants and well-known proprietary preparations."

It will be noted that the OPA recognizes only drugs of the U. S. P., N. F., and New and Non-Official Remedies of the American Medical Association. This does seem to be a very intelligent approach to the subject since the U. S. P. contains many items, such as, Aspirin, Milk of Magnesia, Tincture of Iodine, to name only a very few, for which salesmen are hardly required to have these items sold sufficiently to maintain the health of the Nation. This opinion indicates that there is to be a sharp line of demarkation between salesmen for various types of medicine, and that proprietaries—ethical or not—are to have no standing unless they are approved by the A. M. A.

Farmers and Medicines

AT A recent meeting held by mid-west farm papers, field editors expressed enthusiasm over the revival of business and social life in the villages and small towns of America. Rubber conservation and the serious shortage of farm labor is reversing a trend started twenty years ago with good roads and the automobile. That national rationing of gasoline will further intensify this change in trading habits of one-third of our population is certain. But with this booming business the small town dealer faces some very different problems. Transportation may well be his most serious difficulty. Almost entirely dependent upon wholesalers, these stores will be placing a heavy added burden on wholesale delivery facilities.

Contact with salesmen, reduced in many small towns to the vanishing point, will have its effect in his lost contact with suppliers, in adjusting grievances, familiarity with new products, and developments, and merchandising helps. As shortages increase, quotas are set, and shipping troubles grow, manufacturers will tend to deal to an ever increasing degree with large retail units which are easily accessible and take large unit shipments. And in many cases, manufacturers finding production limited, and selling easier, will give more attention to selective distribution, picking the retailers of proven merchandising ability, good credit, accessible to cooperative sales help, in an effort to have a structural distribution that will put him in a favorable position for the post-war period.

While consumer needs definitely favor the small town retailer for the duration, the economics and practical problems are against him. But in this industry are products essential to health which must be made available to the farm population.

If farmers are too busy producing more food to get to the distant city, if rubber and gasoline conservation hold them within bounds, then a way must be found to make medicines easily accessible to them. It would be much better for this industry to solve this problem than to pile an additional burden on the shoulders of the government.

Socialized Medicine

DRUG manufacturers must keep their eyes open lest the war effort be used as a means of socialized medicine being adopted in this country. We well remember how prohibition was first introduced in the last war as an emergency measure and then became a law that was put into the Federal Constitution so that it would be in effect forever. Just as the prohibitionists took advantage of the other world war to advance their pet theory, so there are many engaged in the present war effort who are only there so they can advance some social reform that they have been fostering for many long years.

With regard to the socialized medicine plan, Senator James M. Mead—New Deal favorite from New York whom President Roosevelt recently pitted against Farley's candidate, John J. Bennett, Jr., for New York Gubernatorial candidate to oppose Dewey—had the following to say in the U. S. Senate on September 14 with reference to transferring physicians from civilian life to the Army and from certain sections of the country to more crowded sections:

"Nevertheless, from some Federal source must come the necessary funds to establish medical facilities and perhaps even to guarantee the payment of the physician at least in part during the period when he is becoming established. The mechanism already created whereby Federal funds are made available for distribution by State health agencies, welfare agencies, or industrial departments, when plans have met suitable standards, would seem to meet this need."

Senator Mead does not speak for himself, as a rule, rather does he speak for the higher-ups in the New Deal. It is apparent that at least some of the big shots in the Administration are strongly in favor of socialized medicine.

To aid in the development of socialized medicine, the war conditions may give the experience necessary to put it into force after the war is over. Dr. Samuel Binkley, medical director of the American Society for the Control of Cancer, stated late last month that a long war will mean the end of "luxury medicine" even for those who can afford it. "It is entirely possible," stated Dr. Binkley, "that the people of the United States may be faced with some form of rationing of physicians in a long war of survival. There are not enough doctors to care for an armed force of 10,000,000 men and at the same time provide luxury medical care for the civilian population.

"Should rationing of physicians become necessary, people may be asked to take their medical problems to a centralized hospital in a community where the remaining local physicians can pool their resources, budget their time, and quickly sift serious sickness from simple ailments not entitled to consideration during a war emergency."

Cancer and Proprietaries

THE good old medical profession never misses an opportunity to take a shot at the drug manufacturers. Recently in New York, Dr. George T. Pack, addressing 150 officers of the Women's Field Army of the American Society for the Control of Cancer, told them the causes for the high mortality in cases stomach cancer included "the flagrancy of high pressure salesmanship through the radio and the press by manufacturers of proprietary drugs in order to induce the public to treat its own indigestion."

Thus another doctor blames the drug manufacturers because people do not go to the doctor soon enough. Dr. Pack says that 66 per cent. of the cases lost is the fault of the patients that they did not consult a physician soon enough, and the other third is the fault of the doctor first consulted.

We do not know how the doctor intends to have everyone with cancer consult the right physician soon enough to allow a cure to be effected. Human nature being what it is, the very large majority of people will not consult a physician until they are unable to carry on. The fact that they buy certain medicines to relieve what they think might be simple indigestion, gives them only slight temporary relief and certainly does not retard the symptoms of the disease to the point that a man can carry on if his condition of cancer is producing sufficient distress to send him to a doctor.

We would like the doctor to try some of these proprietaries about which he complains, on some of his patients with known cancer and see if he has a just complaint against them. And he need not be afraid of publishing his results if he finds he has a complaint, because these products will not then be labeled "for relief of symptoms of stomach cancer."

Cosmetic Transportation

A NEW advisory committee has been appointed by the WPB to cover the subject of Toiletries and Cosmetics Industry Transportation. Robert Blair, industrial specialist of the Chemical Branch is the Government presiding officer, and the committee members are: Michael Harris, Max Factor, Inc., Hollywood; Stuart E. Kaiser, production manager of Andrew Jergens Company, Cincinnati; Howard S. Lyon, president of Comfort Manufacturing Company, Chicago; Abe Plough, president of Plough, Inc., Memphis; S. V. Rettino, traffic manager of Bristol Myers Company, Hillside, N. J.; Horace Rosner, Coty, Inc., New York; Carl von Rohr, Burma-Vita Company, Minneapolis; O. D. Wheaton, traffic manager of Wildroot Company, Buffalo.

Alcohol Formulae Revision

DENATURED alcohol formulas have been revised by the Treasury Department. The new formulas provide for the use of new denaturants to replace some that are no longer available in sufficient quantity or are available only at prohibitive prices. Also the regulations for the control of denatured alcohol have been brought up to date by properly incorporating all revisions made since the last general revision of 1938. The changes in formulas No. 12, 13, and 14 for completely denatured alcohol were caused by a shortage of denaturing materials necessary for direct war uses. Substitution of methylisobutyl ketone, acetaldol, and kerosene is ordered.

Three new specially denatured alcohol formulas have been added: 27-B (soft soap and oil of lavender or oil of cedar leaves) for use in face and hand lotions, shampoos, external pharmaceuticals not U. S. P. or N. F., liniments, U. S. P. and N. F. disinfectants, insecticides, and similar products; 40-A (sucrose octa-acetate and tertiary butyl alcohol) for use in toilet preparations; and 42 (potassium iodide and mercuric iodide, or sodium ethylmercuric thiosalicylate, or phenylmecuric benzoate, chloride or nitrate) for use in sterilizing and preserving solutions.

Napkin Distributors

ALONG with other distributors of paper and paper products, all distributors of sanitary napkins are now under Federal license in accordance with an OPA order effective September 24. The order is part of the effort of OPA to bring under the GMPR all distributors who do not answer the definition of wholesaler.

Citric and Ascorbic Acids

ALL distributors of citric acid, as well as all distributors of vitamin C, or ascorbic acid, have been placed under license by two OPA orders. These orders do not apply to retailers. The purpose of these orders is to bring under control the distributors other than manufacturers who are already under control.

Industry Concentration

WHILE we do not believe that concentration of industry will be applied to this industry because the plants of this industry are not adaptable to direct war work, because the labor employed by the industry is relatively small in amount and unskilled, and because transportation facilites used to transport the products of the industry is small, many people are speculating on the possibility of it being ordered.

Speculation is going so far that manufacturers of U. S. P. products are wondering what would happen if eastern manufacturers were told to confine their operations to the eastern territory, and western manufacturers were told to confine their operations to the west. This would save a certain amount of our transportation facilities. But many manufacturers of U. S. P. have spent much time and money over the past years to convince consumers that their particular labels meant better and safer products than those of their competitors. If these manufacturers were localized in their operations this time and money would be thrown overboard and it is doubtful if it could ever be recovered.

Then some are speculating to the extent that manufacturers of some products of this industry located in parts of the country where labor for direct war work is in very great demand, might be forced to move their manufacturing operations to other parts of the country so as to free such labor as they have for direct war work. These people think that the Government might rather force the manufacturers to move than to try to get the workers to move to localities in which they are needed. They say that no matter that the amount of labor is

small in number and unskilled, it can be trained and used for something.

These people point out that the stove industry and the bicycle industries have been forced to concentrate, but they forget that the two industries that they name have been so sharply curtailed that there is not enough business to keep more than two plants in operation. They also forget that the plants thus released can be of great value in the production of materials used directly in prosecution of the war.

Hand Creams and Mouth Washes

PROTECTIVE hand creams as well as mouth washes have been removed from the Cosmetic Limitation order. This means that they can be manufactured and sold in unlimited amounts since they are not considered cosmetics. It is understood that some big manufacturers of motors, tanks, airplanes, and other war equipment insisted that protective hand creams were essential for their workers.

OPA Standards Division

DUE to the fact that prices are now under ceilings, the OPA is going to see to it that manufacturers do not attempt to lower the quality of their products as a means of charging more for their products even though the quoted prices remain the same. To be certain that quality is maintained, the OPA has formed a Standards Division which will provide the operating divisions of OPA with such technical assistance as might be required to develop specific standards for inclusion in all regulations where quality is a factor.

The difficulty will now arise in some products of this industry that substitution for critical materials might be interpreted by OPA as a lowering of quality. If such interpretation is made, then the manufacturers involved must apply to OPA for a new price because the product is deemed to be one which the manufacturer has not sold before. It is quite likely that substitute ingredients or packaging materials would cost practically the same, or even more than the ingredients or packaging materials for which substitutions are being made.

Higher Chemical Rating

CHEMICAL manufacturers are now granted a higher rating of A-1-a on all metal parts for maintenance and repair, including replacement of fabricated parts and equipment having a unit value of $250 or less, under an amendment issued September 19. The metals to which this rating applies is List 1 of Form PD-25A. All other materials needed for maintenance, repair, and operating purposes are assigned on A-1-c. None of the metals assigned can be used for metal containers or container materials without specific authorization from WPB.

Seizures in This War

SEIZURE of German owned properties is somewhat different in this war than it was in World War I. In the former war, German owned properties in this countries were still in the names of the German owners when the war broke out and therefore seizure was easy. However, the Germans learned their lesson, and most of the properties they owned in this country prior to this war were transferred to citizens of this country who were only the nominal owners, with the Germans still holding the basic titles. Investigation and proof of this enemy ownership takes time, and this is why seizures are being made long after Germany and ourselves formally declared war against each other. An example of this type of thing was the seizure last month of thirty-seven per cent. of the stock of Rohm & Haas, Philadelphia, and twenty-eight per cent. of the stock of Resinous Products & Chemical Company. The seized stock of Rohm & Haas was registered in the name of Otto Haas, Villanova, Pa., as trustees for Dr. Otto Rohm and Dr. Rohm's children.

Can't Get Substitute

WE became all excited recently over a rather new organic chemical which was going to be a honey of a substitute for glycerine. Imagine our disappointment when we were informed that the Government wanted all that can be produced for use in hydraulic brake fluids on airplanes. The chemical is just about perfect for that use since when it is added to the hydraulic brake fluid, the fluid just becomes slightly slushy at forty below. It would not do any good to tell the name of the chemical because it cannot be had.

Glass Container Limitation

WPB GLASS Limitation Order L-103 has been amended under date of September 12. No person is allowed to manufacture a glass container of any design not in existence on May 11, 1942, except when a schedule or exhibit thereof issued by the Director General for Operations or the Director of Industrial Operations specifically authorizes the use of a design, or when no suitable glass container exists for packing a product not previously packed in glass, or when it is necessary to design a special glass container in order that it can be used on existing filling and packing lines previously used for containers made from other materials, or when a minor change in an existing permitted container design will result in a glass container that can be made faster or more efficiently, or of better quality. Schedules showing permitted designs have been issued for distilled spirits, malt beverages, preserves and jellies, and wines. No schedules have as yet been issued covering drugs, pharmaceuticals, cosmetics, or perfumes.

Steel Drums Restricted

RAW materials which manufacturers have been receiving in steel drums might be shipped in other types of containers on or after November 13. WPB Limitation Order L-197, issued on September 14, restricts use of steel drums for shipping chemicals and other raw materials starting sixty days after the issuance of the order. A long list of products cannot be shipped in drums at all when the order takes effect. This list consists of dry chemicals, solvents, and other products. Among those listed are: Specially denatured alcohol with the exception of formulas No. 13A, 19, 20, 32, and 42, succinic acid; aluminum sulfate; ammonium, potassium, and sodium bicarbonates; balsam copaiba; bath salts; citric acid; boric acid; mono, di, and tri, ammonium, calcium, and sodium phosphates; lanolin;

paradichlorbenzene; paraffin; petrolatum; pectin; zinc hydrosulfite.

A second list is contained in the order, and these products cannot be shipped in drums, new or used, which were manufactured, purchased, or delivered on or after September 14, 1942. Among these items are: Corn syrup; formaldehyde; animal, fish, marine animal, and vegetable oils, except for fish livers and vitamin oils derived from fish or fish livers; pyrethrum concentrate; rotenone; liquid soaps and detergents; sodium lactate; liquid starches and adhesives.

Drums used for storage for all purposes are limited to five.

Shippers of products for which drums cannot be used are turning to wooden barrels or kegs, cotton bags with suitable liners, multi-ply paper bags, and glass carboys.

The Lipstick in War

COSMETICS are finding their place in the war effort. We hear of rouge camouflage, poison gas protective creams, insect repellent creams, creams for protection against frozen extremities, foot powder—all of which we suggested months ago in this magazine. Now we hear of the important place that the lipstick has taken not only in the first aid kits of all who are practicing first aid, but also in the equipment of the field medical units. All who have taken the first aid course know that when a tourniquet is applied, the letters TK and the time of application must be marked on forehead of the patient so that whoever takes over after the tourniquet is applied will know enough to loosen the tourniquet after fifteen minutes to prevent gangrene developing in the arm or leg to which the tourniquet is applied. In field medical units, treatment with anti-tetanus vaccine is marked on the forehead of the victim with lipstick as well as symbols indicating various types of injuries and treatment given. Then when the patient is being transferred and finally arrives at a hospital, those who take over have an easily discernible and complete record. Lipsticks have taken their place in the direct prosecution of the war, and they are rendering a service of which this industry can be proud.

Also we have recently heard of another direct contribution of the cosmetic industry to the war effort,—a manufacturer is now making a black face cream for use by the U. S. Rangers, who are our Army's Commandos.

Ceilings and Fair Trade

THE conflict between ceiling prices of retailers and Fair Trade contract prices which may be higher than the ceiling prices of these retailers can be adjusted if the retailers make application to the OPA for relief. However, in order for a retailer to obtain permission to raise his own ceiling price on any commodity to the minimum price established in a Fair Trade contract, three qualifications are necessary. These are:

1. That his maximum price is less than such minimum price.

2. That the commodity was generally sold at retail during March 1942 at such minimum price within the locality in which his selling establishment is located.

3. That he has been permanently enjoined by a court from selling the commodity at less than such minimum price.

It will be noted from this amendment to GMPR, issued September 19, that the retailer must make the application. The only way in which the manufacturer can force the retailer to make application is to obtain an injunction against him, as this injunction is a necessary qualification to favorable action upon the retailer's application. Refusal to sell the retailer would not be sufficient. However, two cases now pending on appeal in New Jersey and New York, were decided by the lower courts in a manner that would allow the offending manufacturers to sell at the cut prices for the duration. If these decisions are confirmed, the only actions that the manufacturers would have would be refusal to sell these retailers. However, in view of the OPA amendment to grant relief, it is likely that the higher courts might reverse these decisions and grant the desired injunctions.

No Botanical Ceilings

PICKERS, growers, diggers, and gatherers of botanical drugs can sell their products without any regard to former prices. The OPA has exempted these people from the provisions of GMPR. OPA says that the vast majority of these drugs may be picked or grown only during limited seasons of the year, and since most pickers, growers, diggers, or gatherers did not make sales during March 1942, it has been deemed advisable to exempt their sales from the provisions of GMPR.

FDA Backflip

THE Food and Drug Administration seems to have done a backflip in the matter of two products. In the first place, the Administration is notifying manufacturers of externally applied preparations for treatment of scabies that their labeling be revised in order to limit the distribution of such products to, by, or on prescriptions of physicians; and secondly, the Administration has ruled that it is no longer necessary for a purchaser of digitalis preparations to have a prescription,—such products are now being allowed to be sold over the counter so far as the FDA is concerned.

The reasoning given by the FDA in the case of the scabies remedies is that a majority of the leading dermatologists of the country state that the layman is incapable of diagnosing scabies, and even if diagnosis is properly made, the layman cannot treat himself safely and effectively for this condition. They say further that the hazard of a dermatitis resulting from the treatment makes self medication unsafe. The preponderence of information on the danger pertains to use of sulfur mixtures, says FDA, but also the medical literature on the use of benzyl benzoate preparations reveals that this medication is also capable of causing a dermatitis in a significant number of users.

The reasoning given by the FDA in the case of digitalis preparations is that since people do not ordinarily use digitalis for self-medication, it is no longer necessary for the purchaser of digitalis to secure a prescription to obtain supplies.

In the case of these two types of medicines, it would appear that the danger to health is certainly much greater in a layman securing supplies of digitalis without control than in the case of obtaining a remedy for scabies. Certainly if self-medication of scabies is not effective and a dermatitis does develop, the person can go to a physician and have the condition corrected without any serious injury

to his health or life-expectancy. Certainly the chances of a serious infection developing is relatively slight.

In the case of digitalis, even though we are in sympathy with the point of view that a person that knows the disease from which he is suffering should not be forced to obtain a prescription and therefore pay a high price for the drug which he must have, we do not believe that a layman should treat his own heart condition, and certainly he will not go to the physician for a check-up often enough if he is allowed to obtain his own supplies by over the counter purchase.

The reasoning of the two cases seems to us to indicate some new basic change in the attitude of the FDA. What is behind these decisions we do not know but we shall be on the watch for further developments.

Antimalarials

DUE to the fact that East Indian cinchona bark cannot be obtained for import for the duration of the war, this country has had to turn to South America for cinchona bark. But the various types of cinchona barks that are available from South America contain very little or no quinine although other cinchona alkaloids such as cinchonidine, cinchonine, and quinidine, can be obtained from them. And since available supplies of quinine are to be restricted for the use of our armed forces fighting in the tropical parts of the world where malaria is prevalent, malaria cases in this country will have to be treated with a mixture of cinchona alkaloids rather than with straight quinine alkaloids.

For this reason it has been necessary to turn to the use of Totaquine. This product is a mixture of cinchona alkaloids, and for years it has been included in the British Pharmacopoeia. The British set up official standards for this product many years ago for the reason that various parts of the British Empire contain local barks that were not high enough in quinine to make extraction of pure quinine feasible. Also use of the local barks for the extraction of Totaquine gave these countries a much lower priced anti-malarial than quinine extracted from the Dutch bark.

A standard for Totaquine has been published in U. S. P. XII, but this standard has been changed following a conference held in Washington recently. The original U. S. P. XII standard called for "not less than 10 per cent. of anhydrous quinine, not less than 25 per cent. of cinchonidine and anhydrous quinine combined, and a total of not less than 70 per cent. of cinchonidine, cinchonine, anhydrous quinidine, and quinine."

In the new standard, which will replace the one just quoted, Totaquine "contains not less than 7 per cent. and not more than 12 per cent. of anhydrous quinine, and a total of not less than 70 per cent. and not more than 80 per cent. of the anhydrous crystallizable cinchona alkaloids, the designation 'crystallizable alkaloids' referring to cinchonidine, cinchonine, quinidine, and quinine."

The newer standard sets a lower quantity of necessary quinine in the mixture, and also sets an upper limit, or ceiling, where none existed in the previous standard. This means that available supplies of quinine can be stretched to produce a greater quantity of anti-malarials in the form of Totaquine.

A review of the various reports by the Malaria Commissions of the League of Nations and by other Commissions from Britain, India, the Phillipines, and other countries, seems to establish beyond a doubt that Totaquine, possibly in somewhat larger doses than administered when quinine is used, is equal to quinine in efficiency in malarial treatment.

A report given to the recent Washington conference by Dr. Joseph Rosin of Merck & Co., on 183 samples of cinchona barks imported from Central and South America during the past six months, stated that between 20 and 25 per cent. of the barks had none or very small percentages of quinine, and that the average anhydrous quinine content of the 183 samples, excluding from the average the samples that showed no alkaloids, was about 1 to 1¼ per cent. Also brought out at the conference was the fact that even this low-alkaloid-containing bark is limited in amount and is entirely inadequate to meet the need for quinine or its substitutes since the peace time requirement of this country is more than 3,000,000 ounces, and this demand is now greatly augmented by the requirements of the Army and Navy, as well as the demands coming from tropical countries now cut off from their regular supplier.

The new standard for Totaquine is to be official immediately upon publication of Pharmacopoeial Supplement containing the new monograph. The Committee on Drugs and Medical Supplies of the National Research Council will encourage an educational program to the medical profession setting forth the value of Totaquine in the treatment of malaria and recommending its use as a replacement for quinine wherever possible, to conserve the limited stocks of quinine. Simultaneously, wholesale druggists, hospitals, and dispensing pharmacists will be notified so that stocks of Totaquine will be made available to physicians and their patients.

The constant search for products to replace quinine in the treatment of malaria is still going on throughout the world. Australia is experimenting with the bark of a tree known as Petalostigma quadrilocukare, also known as native quince, crab-tree, and emu apple. It grows widely in Queensland and New South Wales and extends to Western Australia. In addition to the principle reputed to act like quinine, the bark yields a camphor-like essential oil and brownish-yellow dyes.

Atabrine, the synthetic organic quinine substitute which originated in Germany and sold in this country by Winthrop Chemical Company, is now selling to the Government at a new low price of $4.50 per 1,000 tablets, according to Dr. Theodore G. Klumpp, Winthrop president, who recently announced that the company had received from the Army the largest single Atabrine order on record. Dr. Klumpp also announced that production of Atabrine tablets is now in excess of 500,000,000 tablets per year, sufficient to treat 33,000,000 cases of malaria, and is rapidly approaching a rate of 600,000,000 tablets, sufficient to treat 40,000,000 cases. The cost of the treatment of a case of malaria with Atabrine at this new low price is 6¾ cents, compared with 27 cents for quinine, according to Dr. Klumpp.

COSMETIC ORDER AMENDED

COSMETIC Limitation Order L-171 has been amended. Under the terms of the amendment, the quantity of cosmetics produced in samples and testers in 1941 are to be included in determining both the production and sales quotas, but such samples and testers are not to be included as marketable units in determining production and sales quotas. Also, no sample units or tester units distributed after July 17, 1942, but not sold, are to be regarded as marketable units.

The lists of products in the original order have been changed. The restriction on titanium dioxide in baby powders and toilet powders have been removed in List 1. Also in List 1, "Shaving Cream, Soap or Liquid," has been changed to read "Shaving Soaps and Brushless Shaving Creams." Under "Tooth Cleansers," instead of "Coconut Oil Derivatives," the restriction is now upon "Coconut Oil."

Baby Oil, Eye Drops (containing organic material), and Permanent Waving Cream have been added to List 2. Instead of "Shampoos," "Soap Shampoos" are now specified in List 2, thus Soapless Shampoos being dropped from List 2. "Mouth Washes" are removed from List 2, and are therefore completely removed from control under the order.

The word "sizes" under the order is now defined to mean the volumetric size. Therefore different products of varying specific gravities would be considered to be packed as the same sizes if the cubic contents of the packages are the same.

Where two or more varieties of a product or perfume odor are in different physical forms (solid, semi-solid, or liquid), each such variety may be regarded as a separate product or a separate odor. Therefore, under this amendment, manufacturers of Tooth Cleansers, for example, can have three sizes for their paste, powder, and liquid.

The text of the amendment follows:

War Production Board
L-171, Amendment 1 to Schedule 1

Part 3019—Toiletries and Cosmetics.

(Amendment 1 to Schedule 1 to General Limitation Order L-171)

Section 3019.2 Schedule 1 to General Limitation Order L-171 is hereby amended in the following respects:

1. Paragraph (b) (1) is amended by adding at the end thereof the following:

Any person who distributed in sample units or tester units any portion of the quantity of a toiletry or cosmetic product which he, under his name or brand, produced or caused to be produced during 1941, shall regard such portion not only as part of his 1941 production, but also as part of his 1941 sales, for the purpose of determining permitted production and permitted sales, as to quantity, under this paragraph (b) (1); but he shall not regard such units as marketable units for the purpose of determining permitted production or permitted sales, as to marketable units, under this paragraph (b) (1). No sample units or tester units distributed after July 17, 1942, and not offered for sale nor sold in any manner by the person under whose name or brand they are produced or caused to be produced, shall be regarded as marketable units for the purposes of this Schedule.

2. Lists 1, 2 and 3, attached to Schedule 1, are amended to read as follows:

List 1

Baby powder (containing no zinc oxide).

Eye wash and eye drops (containing no organic materials).

Shaving soap and brushless cream (containing no coconut oil, alcohol or added glycerin).

Soap shampoo (containing no coconut oil, alcohol or added glycerin).

Toilet powder (including after-shave, bath, body, dusting, sachet, and talcum powder, containing no zinc oxide).

Tooth cleanser, liquid, paste and powder (containing no alcohol, glycerin, coconut oil, or wetting agents).

List 2

Baby oil.
Baby powder (containing zinc oxide).
Bath salts.
Brilliantine.
Cleansing cream.
Cleansing lotion (non-alcoholic).
Cologne.
Compact for wet application.
Cosmetic stockings.
Cuticle softener (containing no sulfonated oils).
Deodorant and anti-perspirant.
Depilatory.
Eyebrow pencil.
Eyeshadow.
Eye wash and eye drops (containing organic materials).
Face lotion and hand lotion.
Face pack.
Face powder.
Hair dye and hair tint.
Hair lotion (non-alcoholic).
Hair oil.
Hair pomade.
Hair rinse.
Hair straightener.
Lip pomade.
Lipstick.
Lubricating cream.
Mascara.
Nail Polish Paste (containing no tin oxide).
Nail polish powder (containing no tin oxide).
Perfume.
Permanent waving lotion and cream.
Powder, cream, paste and liquid (including blemish concealer).
Protective cream.
Rouge.
Soap shampoo (containing coconut oil, alcohol or added glycerin).
Shaving soap and brushless cream (containing coconut oil, alcohol or added glycerin).
Suntan preparation.
Theatrical makeup.
Toilet powder (including after-shave, bath, body, dusting, sachet, and talcum powder, containing zinc oxide).
Toilet water.
Tooth cleanser, liquid, paste and powder (containing alcohol, glycerin, coconut oil, or wetting agents).
Waveset.

List 3

After-shave lotion.
Astringent.
Bath milk.
Bath oil.
Bleach cream and bleach lotion (including freckle remover).
Body rub.
Bubble bath.
Cleansing lotion (alcoholic).
Cuticle softener (containing sulfonated oils).
Eyelash curler.
Hair lacquer.
Hair lotion (alcoholic).
Lash and brow dye.
Liquid lip color.
Nail bleach.
Nail enamel.
Nail enamel remover.
Nail polish paste (containing tin oxide).
Nail polish powder (containing tin oxide).
Plucking cream.
Skin freshener.
Tooth whitener.
Any other toiletry or cosmetic product not named in Lists 1 and 2 above.

L-171—Amendment 1 to Schedule 2

Amendment No. 1 to L-171.

Part 3019—Toiletries and Cosmetics.

(Amendment 1 to Schedule 2 to General Limitation Order L-171).

Section 3019.3 Schedule 2 to General Limitation Order L-171 is hereby amended in the following respects:

1. Paragraph (a) is amended by adding thereto the following subparagraph:

(2) "Size" means size by volumetric capacity of the container.

2. Paragraph (b) is amended by adding thereto the following subparagraph:

(5) In any case where a person, under his name or brand, packs or causes to be packed two or more varieties of a toiletry or cosmetic product (or of an odor of perfume) which are in different physical form (solid, semi-solid or liquid), each such variety may be regarded as though it were a separate product (or, in case of perfume, as though it were a separate odor) for the purposes of this Schedule.

(P. D. Reg. 1, as amended, 6 F. R. 6680; W. P. B. Reg. 1, 7 F. R. 561; E. O. 9024, 7 F. R. 329; E. O. 9040, 7 F. R. 527; E. O. 9125, 7 F. R. 2719; sec. 2 (a), Pub. Law 671, 76th Cong., as amended by Pub. Laws 89 and 507, 77th Cong.).

Issued this 26th day of September 1942.

ERNEST KANZLER,
Director General for Operations.

PENALIZED ON ALCOHOL

Halitosine Company, St. Louis, manufacturer of mouth washes, rubbing alcohol, and similar products, was penalized October 1 for acceptance of restricted alcohols in excess of the quantities established as its quotas by General Preference Order M-30. Suspension Order S-92, issued by WPB, charges that the company took deliveries of 1900 gallons of ethyl alcohol, and 1800 gallons of isopropyl alcohol in excess of permitted amounts during the first calendar quarter of 1942. The order reduces the company's normal quota for the coming three months by 150 per cent. of the amounts which it accepted illegally.

N.W.D.A. MEETING

THE annual meeting of the National Wholesale Druggists Association was boiled down to two days of its business sessions this year with no other entertainment than luncheons on the two days, and a banquet on the second evening. All records were broken for attendance with upwards of 900 present at each of the luncheons, and the banquet sold out at the capacity of the Waldorf-Astoria ballroom, which in this case was something over 1,700 people. The meetings were particularly well attended with practically everyone's mind groping for the answers to the problems of today and the immediate future.

President Lee Wilson Hutchins, in his address to the Association, had the following to say:

"Those of us in the drug industry find ourselves today in a more favorable position than many of our friends engaged in other lines of business. It is probably a fact that the wholesaler is in a somewhat more favorable position than the retailer, because a larger percentage of our business is in drugs, medicines, and chemicals than is the case with the average retail drug store. Consequently the wholesaler should be able to maintain his volume, by percentage, more successfully than the retailer. The government naturally has the first call on all supplies, and it is recognized that consumer needs will be served only after the war needs have been satisfied.

"We must therefore look forward, without question, to a declining volume, and that will necessitate many changes in our methods of doing business.

"In the drug business, at least, the future of most manufacturers, and of all wholesalers, is tied up in the future of sixty thousand retail drug stores. There will be casualties, and many drug stores will go out of business, and many will turn into patent medicine stores, at least for the war period. Everywhere druggists are faced with a call to the armed services, with no opportunity or possibility of selling their stores. Because of the scarcity of registered pharmacists, they must of necessity have these stores operated by their wives, or others, as patent medicine stores in order to protect their investment. I ask the question bluntly:—Shall we continue to serve them? It has always been the claim of the service wholesale druggist that he served drug stores only, in communities where there were drug stores. Nevertheless we are going to be faced immediately with a fact, and not a theory; and the fact is

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McKesson & Robbins, New York

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James W. Roberts, The Henry H. Gilpin Co., Norfolk.
Austin R. Waite, Walding, Kinnan & Marvin Co., Toledo.
John C. Davis, Davis Brothers, Denver.
Claude L. Smith, McKesson & Robbins, Cleveland.
Al B. Benson, McKesson & Robbins, Boston.
Carl F. G. Meyer III, Meyer Brothers Drug Co., St. Louis.

that many of our retail druggist customers of long standing are going to ask us to continue to serve their stores as patent medicine stores while they are serving their country. I am going to go on record as saying that I believe that the wholesaler has, above all, a moral responsibility to these good customers and friends.

"The manufacturer has it within his power to maintain our present system of distribution, and permanently to avoid monopoly by not putting the small retailer at too great a disadvantage in buying, as compared to the chain drug store or department store. Certainly if unreasonable differentials are established or continued, the fate of the small retailer will be an unhappy one. None of us fails to recognize that modest differentials must exist, but improper differentials are both unfair and destructive.

"The situation in the drug industry, at the moment, is quite satisfactory. The stabilization programs which have been established by many of our manufacturing friends are unquestionably sound, and where price differentials exist, they are accurately related to the size of purchase. Statistics indicate that price levels, both at wholesale and retail, in our industry are very fair ones. We believe the government is well satisfied in this particular. I want to encourage those who have already stabilized the distribution of their products to continue their present plans, and I want to urge those who have not stabilized to study the whole cost of distribution very carefully indeed.

"It is unfortunately true that while we have made many studies about the cost of distribution at wholesale, we, as an association, have made no effort to study the manufacturer's cost of distribution. As a matter of fact, many manufacturers have not studied it on their own behalf, and many manufacturers have no idea whether they are pursuing the most economical system of distribution at the moment, or whether conceivably they might find, for example, that distribution through the service wholesaler has, under present conditions, many, many advantages, which will unquestionably carry over into the postwar economy.

"While manufacturers and wholesalers are studying distribution costs, they must give serious thought to the elimination of literally hundreds of so-called "slow moving items." Many of them are nonessential, and there is no justification for their existence, and they are a handicap when it comes to attempting to streamline distribution. The war will eliminate many of these items, because of the inability of many manufacturers to secure the very supplies which are needed to produce them. Over and above that, however, manufacturers should scrutinize their products carefully, and drop, wherever possible, items for which there is no economic justification. Simplification will go a long way toward making it possible for all of us to maintain our businesses through this war period. The wholesaler is already beset by many difficulties, and he is accepting the necessity of changes which, a few months ago, would have appeared impossible or impracticable to him. Scores of items which the wholesaler has distributed for years are now unobtainable, and he sees his volume on those items become nonexistent.

"His labor turnover is terrific, particularly in centers where he is in competition for labor with war production. Many wholesalers have only a shell of their former organizations left intact, and it is not uncommon to find only one or two experienced men in a whole department such as order-filling, checking, packing, pricing, etc.

"Along the Eastern seaboard, the wholesaler has already come face to face with gasoline rationing. September 25, William M. Jeffers, the rubber director, issued an order to the Office of Price Administration to institute nationwide gasoline rationing. It is presumed this will be effective about November 22. This will force the wholesaler to reconstruct his fixed ideas of selling merchandise.

"The wholesaler may find in the immediate future that he will be calling on a customer only once where he has previously called as many as four times; in other words, possibly once a month, instead of once a week, or once in two months instead of once in two weeks. This will not be so much the case with service wholesalers who are operating in large metropolitan areas as with wholesalers whose business is largely in rural sections. Many wholesalers are serving retailers two or three hundred miles away, and that will be difficult business to solicit through salesmen, in the face of gasoline rationing. More and more business will come into the house directly from the retailer. The wholesaler will have to use his imagination, and will have to produce selling ideas and ammunition which will get that business on a competitive basis. More catalogs and price lists will be printed and distributed, and the wholesaler will rely more and more on the printed word to bring in the business.

"This does not mean that the wholesaler is voluntarily going to eliminate all his salesmen, but many of them will be taken into the armed services, and others will be used in the wholesale houses themselves in responsible capacities. In territories where salesmen are forced to reduce the number of calls made on a retailer in a month or a year, each call must be more productive than ever. The tendency will be for the salesmen to travel more slowly, and to spend more time with the retailer on each call, and come out with a complete order. At the same time, the retailer will be happy to spend more and more time with the wholesaler's salesman, because his contacts with people outside his own community will become fewer and fewer.

"I must refer to the whole problem of concentration, which seems to be inevitable, not only in manufacturing but in wholesaling and retailing, if the war is to go on for several years. Two or more manufacturers may be obliged to consolidate their efforts and products into one plant, and it is conceivable that in larger communities especially, two or more wholesalers may be forced to combine their operations. This may even apply to the retail drug trade, and we may find a re-

duction in the total number of drug stores on that account.

"Combining wholesale drug houses will put quite a strain on employer and employee relationship, and this brings us face to face with the necessity of trainingand educating our new employees, so that we may be prepared to accept this eventuality. Large corporations have for many years spent time and money training employees, but the wholesaler and the small retail druggist have been very slow to accept this necessity. The association has produced considerable material which will be helpful to wholesale druggists and manufacturers in their training courses, and right now Sales Management Guide No. 2 is off the press, and I offer it to you for your careful study and consideration. Thoroughly trained new employees will accept the adjustments of this war period more gracefully and will do a better job than the man or woman who is just put to work without any training whatever. I recommend that the association pursue this particular problem vigorously in the next year.

"Wholesalers have been criticized in times past by the manufacturers for not giving them a real selling service. One of the wholesaler's excuses has been that he had too many customers on his territory who were not good credit risks, so he could not offer the substantial coverage which the manufacturer required. Thereupon the manufacturer many times continued to sell direct, rather than to put himself in the hands of his wholesaler friends. Now is the time to make every retail druggist on the wholesaler's books a good credit risk. Then when the war is over, and the manufacturer comes back to the wholesaler and asks whether he is prepared to give a selling service, the answer can be 'Yes,' and the job can be done to the satisfaction of both the manufacturer and the wholesaler. Let us dismiss, once and for all, the idea that future datings are necessary, or that they produce a competitive advantage which is really worthwhile."

On the important subject of motor transportation, E. M. Brady, assistant chief of ODT Division of Motor Transportation, had the following to say:

"One of the duties of the Office of Defense Transportation is to attain maximum utilization of all existing transportation facilities, in order that essential transportation services may be continued over the longest period possible. It was with this thought in mind that we approached the problem, and it is with this thought in mind that we have continued to deal with it.

"Now is not the time to conjecture as to what might have been done, what should have been done, or what could have been done, but, rather, it is a time to face known facts, determine what is necessary to be done, and then go ahead and do it. No one can do the job alone. Rather, it requires the joint, combined and cooperative efforts of all if necessary results are to be produced.

"Let me then present to you some of the facts which have confronted us and which, by the same token, confront all of you.

GEORGE VAN GORDER
President

"There are approximately 4,891,000 trucks owned throughout the country; 1,047,000 of this number are farm trucks. There are 3,244,000 privately operated commercial trucks; 351,000 are local drayage or cartage trucks; and 249,000 are intercity carrier vehicles. In the aggregate, these vehicles, at the present time, are carrying 163,000,000,000 ton-miles per year, which is over 40 per cent. as many ton-miles as all railroads carried in 1940, and 25 per cent. as many as the railroads are now carrying. Of this, 9,000,000,000 ton-miles are carried by farm trucks; 61,000,000,000 by local city trucks, and 93,000,000,000 in local and inter-city operations.

"As you are undoubtedly aware, the War Production Board and the Office of Defense Transportation jointly allocate all new trucks to civilian purchasers. There are now estimated to be 70,000 new motor trucks and tractors available and subject to civilian allocation. Of this number, approximately 25 per cent. are of small capacity, one ton and under; approximately 70 per cent. are of medium capacity, 1½ ton to 2-ton; and only 5 per cent. are of larger capacity, 2-ton and larger.

"The normal yearly motor truck sales, new and used, total approximately 1,150,000 trucks. The manufacture of trucks and trailers for civilian use has been stopped. You can readily determine that the motor vehicle situation is indeed most acute. The motor vehicle parts situation is equally acute.

"You are all aware that the rubber situation is drastically acute. It is true that there has been some confusion in the past with regard to this latter question. However, the study and report made by the Baruch

(Continued on page 429)

F.W.D.A. MEETING

THE Federal Wholesale Druggists' Association meeting, held in New York, Sept. 24 and 25, held a highly interesting joint session of wholesalers and manufacturers on the first day. The second day was given over to closed sessions of the active members of the Association. The joint session was under the chairmanship of John V. Powers of E. Fougera & Company.

Dr. Henry Bund, director of the price control division of the Research Institute of America, said that mobilization, steadily increasing as to men, materials, and money, will cut more and more deeply into civilian production and the supply of goods for civilian use. Sacrifices must be made. Labor must be controlled and allocated. The living standard will be lowered, and even necessities will be rationed. Productive operations will be concentrated to a considerable extent not only in industry's producing war goods, but also in those producing civilian supplies. This will put distribution to a vital test as equitable and adequate functioning is sought after. It is likely that the war time experience in forced changes in distribution methods might produce a revolution in our distributive system.

Hardy W. Ray, chief consultant in the Requirements Branch of WPB, told of the progress of the program for war production. He said that all in this country must reach and maintain a degree of wrath that will not be abated until the enemy, especially the Japanese, has been wiped out of existence. He decried the prevalent discussions of what is to be done after the war is won; he urged that everyone first concentrated on winning the war, although American citizens are not as yet aroused to the actual necessity of sacrificing for that purpose. Production for war cannot be too great or too rapid. Production, not appropriations, is what counts,—and this is not yet large enough. Production is growing because the facilities are now at hand. Forty per cent. of the production facilities of the country are now at war, and this figure will rise to sixty per cent. by next Spring. Eighty-five per cent. of the current war production is devoted to material needed for the front lines. Speed in production is increasing. All must back the men who fight with determination.

Officers

President

Howard M. Bradbury
The Washington Wholesale Drug Exchange, Wash.

Vice-President

John A. Crozier
Calvert Drug Company, Baltimore

Secretary

Ray C. Schlotterer, New York

Treasurer

Oscar J. Schmitz
Snowden-Mize Drug Company, Atchison, Kan.

Executive Committee

George A. Raab, of Providence Wholesale Drug Co., Providence, Chairman.

J. J. Dreyer, of New Jersey Wholesale Drug Co., Newark.

Harvey A. Henry, of Los Angeles Drug Co., Los Angeles.

O. W. Osterlund, of Philadelphia Wholesale Drug Co., Philadelphia.

O. J. Cloughly, of St. Louis Wholesale Drug Co., St. Louis.

Sergeant-at-arms

J. Addison Mize
Snowden-Mize Drug Co., Atchison, Kan.

Chairman of Associate Members Section

Paige D. L'Hommedieu
Johnson & Johnson, New Brunswick, N. J.

Robert W. Burns, chief of the Proprietary and Cosmetic Section of OPA, explained the need for price control in order to avoid ruinous inflation. The battle for control over prices is only half won so long as no ceilings are placed on wages and prices of farm commodities. OPA is sympathetic toward business in its pricing problems. It strives for a full understanding and tries to be fair and helpful. Price control is not for the purpose of causing unnecessary sacrifices just for the sake of making people suffer. It is an economic necessity, and not a circuitous route to social reform.

Colonel Arthur V. McDermott, director for New York of selective service, explained the working of the Selective Service Act with relation to industry. A necessary man is one who cannot be replaced without detriment to the productive capacity of a company. The title that a man has in a company means nothing, it is what he does that really counts. Executives and key men as such are not exempt. Employers must be alert in filing form 42-A for desired deferments, since delays or failure to file applications for deferment will complicate the processes of appeal. Employers must be informed on the actions of the local boards. They have full right of appeal to trained occupational advisers, and these appeals can be carried right up to the President. Civilian industry must not expect to have the cream of the crop of manpower. It must hire more men over forty-five years of age and more women. The armed forces will get just as many men as are necessary to win the war.

Russell L. Greeman, of the Industrial Department of the Brooklyn Chamber of Commerce, stated that collective bargaining is now almost wholly a matter of governmental functioning. It is essential, in the light of such things as the "Little Steel" order, to provide the labor agencies with the proper data. Cooperation of this sort is desirable and necessary for the welfare of every industrial group since inequalities and inadequacies are difficult to circumvent. Labor relations demand prompt corrective action even with regard to apparently small matters, as these can fester and create real trouble. Upgrading is a wise procedure, and not too costly if applied in the replacing of inducted men since a successor can be promoted without having his pay raised to the level of his predecessor. Smart personnel managers can accomplish a lot no matter what rules they are obliged to follow.

C. F. Hughes, business manager of the *New York Times*, stated that definite plans are needed on war supplies and manpower in the present emergency. If things were in proper balance with respect to the war effort, there would be far less need for control of merchandising. It is puzzling that the army needs such large per capita supplies of all things from shoes to codeine. Perhaps the war effort could be improved by application of methods employed by business.

William Neerguard, independent retail druggist of Brooklyn, said that the effect of the war upon the independent retailer is to make him work a great deal harder. He must watch trends, anticipate developments, continue to fight and not fold up. The independent retailer expects from his wholesaler a constant flow of those things which he needs, and prevention of curtailments or interruption of the flow of supplies except where absolute necessity prevents the wholesaler from functioning correctly. The retailer expects that the wholesaler will see that all retail accounts are treated alike in proportion to the amount of business that they have placed with the wholesaler in the past. He wants to be kept informed of developments, to have the quality of his goods maintained, to be afforded a fair profit, to have his inventory liquid, to be encouraged in his professional aspects, aid in getting competent assistants, and cooperation against the high cost of excessively duplicated specialties.

Fred J. Griffiths, secretary of the National Association of Chain Stores, urged that the help problem not be used as an excuse for rendering poorer service. Still closer cooperation among manufacturers, wholesalers, and retailers is essential. The Government should stick to the adequate performance of the war job and let business handle its own problems. The drug business, especially in prescriptions, is good. Chain store inventories are lower in the number of items stocked by about thirty-five per cent.

I. H. Bander, Vice-president of McKesson & Robbins, urged industry-wide thinking and action for greater cooperation in the war effort and for the maintenance of an adequate retail drug service for the civilian population of the country. Druggists should transfer the greater part of their attention from buying to selling, and thereby develop replacement sales for goods which are now unobtainable. All frills that can be dispensed with should be eliminated, and the best possible use should be made of available supplies and help.

Northam Warren, who has converted the majority of his plant to war work, still felt that cosmetics are essential, particularly from the viewpoint of morale. He praised the Government for making a democracy function in a totalitarian manner, but he thought that some of the limitation orders are tinged with a purpose of social reform.

R. D. Keim, of E. R. Squibb & Sons, stated that despite the problems that exist today, now is the time to eliminate waste and inefficiency. Operations can be streamlined to release men for war activities, although the drug industry will be adequately appreciated in the freezing program of the War Manpower Commission. Realistic plans and policies are the order of the day. Costs of distribution must be lowered. Competitive endeavor must yield to realization of the necessity of equitable distribution of supplies of essential goods. Retailers must be restrained in their buying tendencies. Salesmen must be educators,—they have more to sell now than ever before, and the need is better rather than bigger. The drug industry should develop expert knowledge of efficient distribution bases and methods. It should overhaul its ideas on deals and other merchandising schemes employed in the past. Times are changing and opportunity awaits those who change in the right direction with the trend.

SHAVING PREPARATIONS

By JOSEPH KALISH

THE inroads made in the market for shaving preparations by the electric razor, now proven to be an efficient instrument, have now definitely ceased, at least for the duration, since several million American men now are or will be away from convenient electric outlets. At no time, however, was it possible to predict that shaving creams represent a vanishing market, large numbers of men preferring the razor blade even after a fair trial of mechanical and electrical methods.

The shaving process depends primarily upon two factors, namely, a sharp razor blade, and a thoroughly wet beard. The first is beyond the control of the shaving cream manufacturer, the second is definitely his concern. Beard wetting involves swelling of the individual hairs, a process promoted by hot water activated by means of an effective soap or other surface tension depressant or wetting agent. In the swollen condition the hair is softer and more readily cut by the razor blade. Since the hair is softer, it has also become more flexible and should be supported so that it will remain upright in the path of the blade. This is the function of the lather.

The requirements of a good shaving cream of the lathering type are easily enumerated, but not too easily met. The cream itself should be soft and smooth, and preferably white. It must be free from lumps and grittiness. It must adhere well to the brush and to the face. It must quickly produce abundant, fine-textured lather which retains moisture for the duration of the shave. It must be non-irritating.

Lathering shaving creams are composed of at least 50 per cent. of soap, the rest being for the most part water and glycerin. The soap itself is made from a mixture of fats and oils, the most important of which is cocoanut oil, stearic acid to give body, and a mixture of alkalies, usually potassium and sodium hydroxides, in the proportions of four to one, or more. The soap content in a good shaving cream is nearer 70 than 50 per cent, a minimum of 10 per cent. being coconut oil soap to provide quick and voluminous lather. The remainder is usually stearic acid, the stearate lathering only slowly, but providing body to both the cream and the final lather. A little glycerin, or other hygroscopic material, is generally included to prevent the cream from drying and hardening in the tube and to make the lather wetter. Sodium alginate is said to be able to replace a large proportion of the glycerin and other gums such as methyl cellulose may prove useful. In order to obtain a product of the proper consistency, neither sodium nor potassium hydroxide may be used alone, the first giving soaps that are too hard, the second giving soft soaps. Triethanolamine, amino glycol, and other organic basic materials also give soft soaps and may be used in place of potassium hydroxide. They will not, however, saponify coconut oil and can be used only with free fatty acids, or can be added to the coconut oil-stearic acid mixture along with enough sodium hydroxide to react with the coconut oil.

The melted fats and stearic acid are poured into the boiling mixture of alkalies in water and stirred and heated until saponification is complete, as determined by testing with phenolphthalein. At this point, the shaving cream as well as its lather will be definitely alkaline, and quite irritating to the skin. It will also be so thick as to be extremely difficult to mix. About one per cent. of boric acid is now added to liberate a certain amount of free fatty acid and reduce alkalinity; the mixture then becomes much thinner. The use of the organic bases previously mentioned assures a mild soap, free from irritating concentrations of strong alkalies. Some of these, however, are likely to cause discoloration.

The cream must be aged for several weeks before it reaches its final equilibrium stage.

Brushless shaving creams are preferred by some men because they are easy to use; they may eventually be preferred by those manufacturers who find it increasingly difficult to obtain coconut oil. These products differ in no important respect from vanishing creams;

although some claims are made for wetting action, it seems more likely that brushless creams act almost exclusively to support the hair shaft and keep it upright in the path of the razor blade. An adequate brushless cream may be made by stirring 20 parts of melted stearic with 74 parts of hot water containing one part of potassium hydroxide and 5 parts of glycerin. Stir until emulsified, allow to stand overnight and stir again to break up the mass formed. Better creams contain 25 or up to 30 per cent. of stearic acid, about one per cent. of cetyl alcohol or other emollient, five per cent. of glycerin or another active water absorbing compound, and one per cent. of potassium hydroxide or the equivalent of an organic base.

As with vanishing creams, brushless shaving creams may also be based upon glyceryl monostearate. Fifteen per cent. of glycerin monostearate is boiled with water to make the simplest type of product. A little lanolin may be added for emollient effect. Incidentally, both lathering and brushless shaving creams packaged in tubes will benefit from the addition of less than one per cent. of light mineral oil to act as a lubricant to facilitate extrusion of the cream. A larger proportion of oil may make the cream stick to the razor instead of washing off readily.

Since brushless shaving creams are practically neutral, while lather creams are distinctly alkaline, brushless creams may in some cases promote the more rapid corrosion of razor blades. The addition of potassium chromate to these preparations has been patented with the claim that the addition acts to prevent rusting by passivation. It would seem unlikely that the corrosion problem is great enough to warrant the addition of a yellow, toxic compound to a toilet preparation that is normally white and should never be toxic or irritating.

Although not creams, liquid shaving preparations will be discussed in this place. As far as we know, no effort has been made in recent months to put real selling effort behind a liquid shaving soap. Although past attempts have not been notably successful, we feel that right now someone is missing a good bet in not playing up an obvious war conservation tie-up. Liquid shaving soaps can be made without coconut oil or glycerin, but, above all, they are marketed in bottles, not in tubes, with consequent saving of metal. Little need be said about actual formulation. The same qualities that are required in a good shampoo are essential in a shaving soap and compositions can be identical. The shaving preparation should be somewhat thicker, however, and this can be accomplished by the use of a little gum in the mixture.

Shaving Creams

Coconut oil	10.0
Stearic acid	35.0
Cetyl alcohol	0.5
Potassium hydroxide	6.1
Sodium hydroxide	2.0
Glycerin	8.0
Water	37.4

Boric acid	1.0
Stearic acid	30.0
Coconut oil	10.0
Palm kernel oil	5.0
Potassium hydroxide	8.7
Sodium hydroxide	1.1
Sorbitol	10.0
Cocoa butter	1.5
Water	33.7

Brushless Shaving Creams

Stearic acid	28.0
Peanut oil	3.0
Potassium hydroxide	1.8
Glycerin	6.5
Water	60.7

Glyceryl monostearate	18.0
Stearic acid	4.0
Triethanolamine	1.0
Glycerin	3.0
Water	74.0

FLAVORING VEHICLES

By M. A. LESSER

"SUITABLE flavoring," observes the pharmacologist Sollmann,[1] "is a reasonable concession to the feelings of the patient; secures more effective cooperation; and may be necessary to obtain the retention of the medicine in the stomach."

This, in brief, forms the basis and indicates the importance of flavoring vehicles from the standpoint of the physicians' prescriptions. To a manufacturer of pharmaceuticals, however, the selection of a suitable liquid flavoring vehicle may spell the difference between the success or failure of his product, whatever may be its therapeutic merit.

Although the spoon method of administering drug products is employed less frequently than in former days; being replaced to a marked extent by capsules, tablets and pills, the liquid vehicle still remains the only means of medicating certain types of patients or dispensing certain types of drugs. Fluids for this purpose must be palatable, otherwise disagreeable tastes may often tempt the patient not to take his drug. More than that, if the taste of the liquid preparation is too obnoxious, its absorption may be inhibited or it may cause nausea and vomiting. Then, too, there is the group of adults who cannot take pills, capsules or the like without gagging.

Children and infants form the most important group requiring medication in a liquid form, and for these little patients the preparation must be more than palatable, it must have a pleasing, desirable flavor. As Goodman and Gilman[2] recently pointed out, children often cannot be made to take a second dose of a repulsive drug, and in their opinion it is an unpardonable sin to insult a sick child's palate. This seems like obvious good sense, but it was not always the case. Many a still-popular remedy owes its continued existence to the fact that the memory of its pleasant flavor is retained by people who now have children of their own.

The acceptance of the factor of flavor in medicine may be considered a really modern advance. It is not so long ago that common opinion among doctors and patients alike held that a medicine to be really effective, had to be bitter medicine. Some of the concoctions used not so many years ago would make a modern patient recoil at the first taste or smell. Nonetheless the idea still persists, as is evidenced by the current use of so-called "stomach bitters", which are supposed to increase the appetite and improve digestion.

Palatability, however has been recognized as a major adjunct to effective medication. One has but to thumb through the official pharmaceutical texts; the U.S.P. and the N.F., to realize the important place occupied by flavoring vehicles in modern dispensing. In these texts are presented a wide choice of preparations suitable for disguising most of the unpleasant medicinal tastes. The classes of flavoring agents most used for this purpose include syrups, waters, elixirs, tinctures, spirits and quite a large number of other substances and preparations with flavor-imparting qualities. Since information relevant to formulation is available in the official pharmaceutical texts, and because questions of suitability and compatibility are discussed in considerable detail in standard texts on medication,[1, 2, 3] such data need not be repeated here.

Flavor depends upon taste perception. Excluding the burning sensation aroused by acid substances, tastes proper may be divided into four distinct categories; namely, sweet, salty, sour and bitter. The sweet taste is perceived the quickest because the taste buds reacting to sweets are located at the tip of the tongue; then comes saline, followed by sour taste, while bitter substances are tasted at the back of the tongue. According to Tangl,[4] an infant tastes with the middle of its tongue.

Temperature has a definite influence on taste perception. Thus, if the tongue is rubbed with ice, most people fail to differentiate between the various tastes. Hence, chilling is a good method to use in taking bitter medicines or other preparations in which undesired tastes cannot be disguised effectively. Conversely, warmth is a stimulant to the taste buds.

Odor is, of course, a prime consideration in preparing and using flavoring substances. Indeed, many so-called tastes are really smells; odoriferous particles of substances which are being eaten reach the olfactory region and arouse sensations which, because they accompany the presence of objects in the mouth, are taken for tastes. This is particularly true in the case of spices.

Fantus[3] warns that, in the flavoring of medicines, powerful odors are generally less pleasant than more delicate ones. To add a pleasant flavor to a not too disagreeable medicine he suggests that milder odors are to be preferred, and mentions such odors as lemon, orange peel, orange flowers, anise, fennel, tolu, cherry and raspberry. For disguising somewhat unpleasant tastes and odors, he recommends more potent pungent substances such as peppermint, wintergreen, cinnamon, cloves, cardomom, ginger and sassafras. For really disagreeable odors, the most potent flavors are often needed, among them being bitter almond, vanillin and coumarin.

Although, when mixed, decided tastes tend to obscure each other, the most popular method for masking disagreeable tastes is by sweetening. This last holds especially true for preparations intended for children.

In former days, the prime purpose of a vehicle was as a solvent or diluent for the active ingredients, with palatability or flavor as a secondary consideration. Now it is realized that in the great majority of cases both of these characteristics are fully compatible and almost equally important. Prescription surveys, however, indicate that not all physicians are fully aware of these facts.

Syrup of Wild Cherry U.S.P. offers a typical example. Despite certain obvious disadvantages, such as an astringent taste and many incompatibilities, this syrup rated very high in the surveys made in 1932[5] and in 1935.[6] Despite subsequent investigations which showed it to lack popularity among patients and to have a low rating as a disguising vehicle,[7] syrup of wild cherry was still a high ranking prescription ingredient in 1941.[8]

The situation was rather aptly summed up by Schicks,[9] and although written in 1939, undoubtedly still holds true today. "Many a physician," he said, "would object to the taste of the medication he prescribes for his patients if he had to take it himself. It is not sufficient for the physician to say to the objecting patient that the bad tasting medication must go with the disease. It doesn't. Medication can be and is made palatable by the considerate physician. Physicians may and do prescribe medication patients will not take. They try it and if it is not satisfactory they also try a new physician. While this situation happens only too frequently, it is entirely unnecessary."

Several years ago, in order to get at the truth concerning people's preferences and actual taste-disguising value of official vehicles, as contrasted to the arbitrary selection of vehicles by physicians, Wright[7] undertook an extensive study of the matter. His frequently-cited report, covering four years of study and involving hundreds of tests on students, was published in 1937. His findings are as pertinent now as they were when reported and hold much valuable information not only for the physician, but for the pharmaceutical manufacturer as well.

The purpose of this study was to determine which of the commonly used flavoring agents (a) appeal most strongly to the majority of individuals from the standpoint of flavor alone, (b) are most effective in disguising the bitter taste of alkaloids and other bitter drugs, (c) are most effective in covering the saline taste of such drugs as ammonium chloride and sodium bromide, and, (d) are most effective in disguising the taste of tincture of digitalis.

From the basis of flavor alone, the preferences most strongly shown were, in the order given, for chocolate, the fruit flavors of raspberry, orange, lemon and cherry, and the root beer flavor of sarsaparilla. Syrups of cocoa, raspberry and eriodictyon (yerba santa) were the flavors of choice in disguising bitter drugs; syrups of cinnamon, orange and sarsaparilla were most effective in covering salty tastes, while syrups of raspberry and prepared cocoa were the leading selections for the tincture of digitalis.

It was found that if equal weight were given the four characteristics studied, an average percentage-effectiveness figure could be obtained. This served as a measure of the all-around efficiency for the routine use of the various flavoring vehicles. The values so obtained are given in the table following, which shows the all-around efficiency ratings of the various flavoring agents:

Flavoring Agent	*Score in Per cent.*
Syrup of Cocoa, N.F.V	71
Syrup of Raspberry, N.F.VI	68
Syrup of Prepared Cocoa, N.F.VI	67
Comp. Syrup of Eriodictyon	59
Syrup of Cherry, N.F.VI	52
Comp. Syrup of Sarsaparilla	48
Syrup of Orange	48
Syrup of Citric Acid	47
Syrup of Cinnamon	46
Syrup of Wild Cherry	35
Elixir of Licorice	32
Aromatic Elixir	27

From this table, it appears that syrups of cocoa, raspberry and eriodictyon are the "all-purpose" flavorings of choice; with syrups of cherry, sarsaparilla, orange, citric acid and cinnamon offering little advantage over each other as second choice. Syrup of wild cherry, and licorice and aromatic elixir are the least efficient of the commonly used flavoring and disguising agents.

Although many authors[1, 2, 3, 9, 10] have listed their recommendations concerning the suitability of many of the standard flavoring vehicles, those of Fantus[11] are especially worth citing, since this worker has spent many years in the study and perfection of such agents.

He recommends syrup of acacia as being especially suitable for lessening the hot, burning taste of carbamide as well as the acrid saline taste of calcium chloride. Syrup of glycyrrhiza (licorice), because of its colloidal nature and sweetness, has been found to have special disguising value for saline substances such as potassium bromide, ammonium chloride and potassium iodide. Syrup of cherry, which he believes to be one of the most delicious syrups of the N.F., is recommended for acidic medicines. Fantus considers syrup of cinnamon (N.F.VI) to be a particularly eligible vehicle for salicylates and iron salts. In his opinion aromatic syrup of eriodictyon is "a veritable pharmaceutic masterpiece;" especially valuable to disguise the bitterness of alkaloids, such as quinine, codeine and strychnine. Fantus also called special attention to the vehicle value of glycerine, and illustrated its use by means of several formulas for sedative combinations.

In a very recent discussion on the administration of medicines to children, the editor of *The Medical World*[12] listed the following suggested flavors and vehicles:

Acetylsalicylic acid (aspirin)—syrup of prepared cocoa (syrup of chocolate)

Acetates, benzoates, carbonates, chlorides, citrates—aromatic waters (peppermint, spearmint, wintergreen, orange flower)

Bromides, iodides—aromatic waters, syrup of orange flowers

Antipyrine—aromatic waters

Salicylates—wintergreen water

Chloral hydrate—aromatic waters, syrup of orange flowers

Ferrous and ferric salts—syrup of orange flowers

Urea—syrup of acacia

Quinine bisulfate—syrup of prepared cocoa (syrup of chocolate)

Chocolate is considered a good vehicle to use for children, but it is stressed that very unpalatable fluids should not be combined with syrups, since this serves to prolong the unpleasant taste. Other commonly used syrups include those of cherry, raspberry, orange, citric acid, licorice, compound syrup of sarsaparilla, and aromatic syrup of eriodictyon.

Improvements in flavoring vehicles are constantly being sought. Here again, syrup of wild cherry offers an illustrative example. Since this vehicle is still widely used in prescriptions (and in commercial preparations as well), despite its known disadvantages, Reed, Burrin and Bibbins[13] investigated the syrup and evolved the following formula which evidently overcomes many of the product's shortcomings and difficulties:

Wild cherry bark	150 Gm.
Glycerine	150 cc.
Granulated sugar	675 Gm.
Alcohol	20 cc.
Filtered percolate, q.s. to make	1000 cc.

Macerate the bark with a sufficient quantity of distilled water for one hour. Run out 400 cc. of percolate using additional water as menstruum as needed. Filter percolate brilliantly clear. Add sugar and dissolve by agitation, then add the glycerine, alcohol and sufficient percolate to make 1000 cc. and strain.

New types of flavoring materials have been suggested. In 1937, Fantus and Dyniewicz[14] advocated the use of fresh or canned pineapple juice as a basis for making a flavoring syrup for prescription use. It is believed that this syrup has a special value as a vehicle for sodium or potassium citrate for which the colored fruit syrups like cherry or raspberry are not suitable since the citrate causes color changes. Tests with syrups of peach and of apricot showed that their flavors are somewhat delicate to have much value as disguising vehicles. Mason[15] has been investigating the possibilities of grapefruit as a pharmaceutical flavoring agent and vehicle.

Special vehicles for hard-to-mask flavors and odors have been suggested in the literature from time to time. Particular attention appears to have been given to the rubber-like odor of vitamin B_1 and to the fishy taste of vitamins A and D. Recently, Kendall[16] of Purdue University presented a formula for elixir of raspberry designed specifically as a pleasant tasting vehicle for thiamine hydrochloride and other synthetic members of the B complex such as riboflavin, pyridoxine, nicotinic acid and calcium pantothenate. This quite palatable preparation for incorporating the vitamins consists of:

Benzoic acid	1 Gm.
Tincture cardomom comp.	5 cc.
Alcohol	150 cc.
Glycerine	110 cc.
Syrup of raspberry, N.F.	160 cc.
Distilled water, q.s. to make	1000 cc.

The preparation is quite stable and can therefore be made in quantity and stocked for use when needed. Experiments have shown that this elixir is compatible with salicylates, bromides, iodides and citrates and with such elixirs as: three or five bromides; phenobarbital; iron, quinine and strychnine; and glycerophosphates.

An earlier elixir of vitamin B complex was given as follows:[17]

Liver extract powder	22.5
Benzoic acid	0.5
Syrup of orange	80.0
Glycerine	55.0
Tincture cardomom comp.	10.0
Sherry wine, q.s., to make	500.0

Mix, macerate for 24 hours with occasional shaking and filter. Then add the vitamins.

Although in both the above formulas, the quantity of vitamins to be added is given, the new minimal daily requirements make it feasible that the quantities of added vitamins conform to the new recommendations, so that each dose will contain a definite proportion of the requisite factors.

As far as this writer is aware no really successful vehicle has been developed that will fully hide the unpleasant after-taste of fish liver oil concentrates containing vitamins A and D. Many attempts have been

made and some of them have been fairly successful. Chocolate, vanilla, certain essential oils (e.g. peppermint) and even fruit flavors have been tried. However, capsules still remain the favorite way of taking these vitamins, and concentrated solutions are used, in drops, for mixing with children's and infants' food.

The preparation of suitable stable vehicles for administering the sulfonamides appears to have caused considerable difficulty from both the solvent and flavoring standpoints. Adults can, of course, swallow pills and capsules. For children it has been suggested that these drugs be added to jellies or cereals or added to infants' milk.[12] However, a really sick child seldom desires food and a fluid preparation is needed.

These difficulties are claimed to have been overcome in a recent patent.[18] According to the specifications, a safe, stable sulfanilamide solution for oral administration may be prepared by mixing, at carefully controlled temperatures, approximately 48 per cent. glucose, 13 per cent. glycerine, 5 per cent. sulfanilamide, and where required, water was to be added to give the desired consistency.

Stability and flavor have also been deterrent factors in making fluid preparations of acetylsalicylic acid (aspirin). Fantus[11] admitted that his syrup of aspirin was not entirely satisfactory in that, while pleasant-tasting when first made, it soon lost this characteristic due to the liberation of salicylic acid. Several years ago Hirschhorn[19] claimed to have prepared a stable, fresh and agreeably tasting solution of the drug by combining it with other analgesic-antipyretic agents in glycerine. A typical formula from his patent specifies the use of:

Acetylsalicylic acid	1 Gm.
Amidopyrine or antipyrine	1 Gm.
Glycerine	30 cc.

The war has brought some restrictions with regard to certain flavoring vehicle essentials—chiefly alcohol, sugar and glycerine. To some extent the problem has been anticipated and the experiences of British pharmaceutical investigators and manufacturers give much valuable information. However, many temporary measures will have to be employed as the war progresses and new shortages crop up. It will very probably mean the elimination of some flavoring vehicles for the duration.

According to an article in the British publication, *Chemist and Druggist*,[20] the following formula was found satisfactory during the last war as a syrup substitute:

Tragacanth powder	2.5 Gm.
Alcohol	a sufficient quantity.
Chloroform	0.25 Gm.
Soluble saccharin	0.25 Gm.
Distilled water, q.s. to make	100.00 cc.

The probability that tragacanth or other gums might not be available led to experimentation with other combinations. Thus where only a 25% sugar reduction was wanted, the following proved suitable:

Mucilage of acacia	25 cc.
Syrup, q.s. to make	100 cc.

The following two formulas were also developed and were found to be stable for four months and longer at the time the report was written:

I.

Gum tragacanth	2.0 Gm.
Glycerine	a sufficient quantity
Water, q.s. to make	100.0 cc.

II.

Karaya	1.0
Glycerine	a sufficient quantity
Water, q.s. to make	100.0

In both of these formulas, saccharin (0.1%) was used as the sweetening agent, and methyl-para-hydroxybenzoate (0.1%) added as a preservative. Glycerine was used to increase miscibility and to form a cream. In making syrup substitutes of the above type, the mucilages were brought to the boiling point, allowed to simmer for half an hour and then strained through flannel.

That American investigators are cognizant of the situation is evidenced by Huyck's[21] report on syrup substitutes. He stated that artificial syrups of satisfactory stability could be prepared with sodium alginate. Irish moss, tragacanth and locust bean gum as thickening agents and soluble saccharine as the sweetening agent. In his opinion the uncertainty of supplies of tragacanth and locust bean gum will probably increase interest in domestic Irish moss and sodium alginate.

Where sugar restrictions are a prime factor, pharmaceutical manufacturers might do well to review the flavoring vehicles suggested for use by diabetic patients. Since these are carefully regulated, not only with regard to sugar content, but often with respect to alcohol and glycerine content, many useful suggestions may be obtained that are quite pertinent to the present situation. For a starter, Crossen's[22] recent article on pharmaceuticals for the diabetic will undoubtedly offer several valuable suggestions.

With many of these war-modified vehicles, the problems of stability and spoilage naturally present themselves. In the standard preparations high sugar, alcohol or glycerine content make added preservatives unnecessary, but with the newer substitute vehicles, particularly those based on gums or the like, the use of preservatives are generally indicated. The esters of parahydroxybenzoic acid have been found to be superior preservatives and less toxic than other preparations of this type. These esters are neutral, odorless and tasteless and quite effective in very low concentrations.[23]

Before concluding this discussion, brief consideration should be given to the factor of color in flavoring vehicles. Color has great psychic value in that it improves the appearance of medicinal preparations and helps to make them more acceptable to the patient. Color likewise helps to identify a particular product, an important consideration with commercial items. In some instances a distinct color serves as a warning in

(*Continued on page 409*)

AUSTRALIAN EUCALYPTUS OILS

By DR. ERNEST GUENTHER

(Continued from last month)

Constituents:[1] Citronellal, as main constituent, around 55 per cent. (it is probably a mixture of d- and l-citronellal); 15 to 20 per cent. d- and l-citronellol; 5 per cent geraniol; 1 to 2 per cent. isopulegol; traces of cineol; sesquiterpenes.

Remarks: From the literature and from analytical data collected in our own laboratories, it appears that the oils distilled in Java, Guatemala and the Seychelles Islands, in other words, oils originating from a moist, tropical climate, have a considerably higher citronellal content than those coming from drier Australia. We found the following constants:

	Australian Oil	*Java Oil*	*Guatemala Oil*	*Puerto Rican Oil*
Specific Gravity at 15° C.	0.881	0.867	0.868	0.869
Optical Rotation	+ 0° 20′	+ 0° 20′	+ 0° 8′	+ 2° 4′
Refractive Index at 20° C.	1.4585	1.4521	1.4525	1.4528
Citronellal Content (hydroxylamine method)	56.2%	80.5%	79.8%	73.0%
Solubility at 20° C.	Turbid in 10 volumes of 70% alcohol; clearly soluble in one volume and more of 80% alcohol.	Hazy in 10 volumes of 70% alcohol.	Turbid in 10 volumes of 70% alcohol; soluble in one volume of 80% alcohol, opalescent with more.	Soluble in 3 to 3.5 volumes of 70% alcohol and more.

The Colonial Institute of Amsterdam[2] arrived at similar figures. They found the citronellal content of three Australian oils to range from 58.6 to 63.2 per cent., while an oil distilled in the Seychelles showed 79.6 per cent.

Cultivation: According to W. Holdsworth-Haines[3] *E. citriodora* has also been cultivated recently in the Seychelles Islands. The seed originated mainly from South Africa. When the young plants had reached a height of 2 feet, they were transplanted from the nursery into the fields. Once established in the fields, the plants require no further care. The leaves of the young plants are large, soft and hairy, while the leaves of older trees are smoother, firmer and without hair. The distillation material consists of either the entire branches or just the leaves and terminal branchlets. After four to five months, enough young leaves have regrown to be harvested again. The yield of oil from six-month-old plants is 16.2 liters, and from three-year-old plants 19 liters per thousand kilos of leaves. The yield of oil in the Seychelles seems to be about twice as high as that obtained in other regions.[4] In the Seychelles the plant is grown in hedge form and can be cut every three months.

According to a planter[5] in Java, the yield from the leaves is 1.7 per cent.; from the wood only 0.8 per cent.

1. *Les Parfums de France* 18 (1925), 72.
2. *Kon. Vereen. Kol. Inst. Amsterdam.* Mededeel. No. XLV, Afd. Handelsm. No. 18 (1938), p. 18.
3. *Perfumery & Essential Oil Record* 27 (1936), 109.
4. *Bericht Schimmel & Co.*, 1937, 37; 1935, 33; 1932, 30.
5. Private communication from Mr. A. H. G. Blokzeijl, N. V. Aetherische-olienfabriek, near Sourabaya.

EUCALYPTUS MACARTHURI

Vernacular name of the plant: Paddy's River Box or Camden Wooly Bud.

Occurrence: Grows in swampy lands or on the banks of streams and rivers. It is cultivated in Victoria.

Yield of oil: The leaves and terminal branchlets of the wild-growing tree yield as a rule only 0.2 per cent. of oil. However the yield is higher at certain periods of the year and can be increased up to 0.74 per cent., if the tree is cultivated.

Cultivation: It is a very beautiful ornamental tree which grows well in any type of soil, provided it has a moderate amount of moisture. The tree grows very rapidly and easily stands repeated cutting back. When cut yearly it can be kept as a small tree, thereby developing much more foliage.

Annual production: So far very small.

Quality of oil: Different from all other eucalyptus oils because neither cineol nor phellandrene is present. It contains about 60 to 70 per cent. of geranyl acetate.

Color: The crude oil is usually of reddish color because of the action of phenols and acids upon the iron condensers in the field stills.

Odor of the oil: Different from all other eucalyptus oils; it is somewhat rose-like.

Rectification: Rectification gives an oil of finer, improved odor and a geranyl acetate content of about 80 per cent.

Uses: The oil may be employed for all kinds of perfumery purposes, especially for the scenting of soaps. Geranyl acetate could be isolated from it.

Constants (according to Penfold):

Specific Gravity at 15° C.	0.9238 to 0.9292
Optical Rotation	+ 1.6° to + 3.1°
Refractive Index at 20° C.	1.4704 to 1.4744
Geranyl Acetate	68.6 to 72.6%
Free Geraniol	2.6 to 7.2%
Eudesol	15 to 17.1%

Constituents: Not less than 60 per cent. geranyl acetate; free geraniol, 2.6 to 7.2 per cent.; 15 per cent. and more of eudesmol which is a sesquiterpene alcohol, $C_{15}H_{26}O$, separating as a white, crystalline mass; phenols; sesquiterpenes; pinene; isovaleric aldehyde (traces); iso amyl and butylic esters of butyric acid (traces).

EUCALYPTUS PHLEBOPHYLLA

Vernacular name of the plant: "Weeping" or "cabbage gum."

Occurrence: The tree, which grows almost 40 feet high occurs in belts of considerable extent in New South Wales.

Yield of oil: The thick coriaceous leaves and terminal branchlets give about 1.45 per cent. of oil which is fairly viscous.

Length of distillation: Distillation lasts only one to two hours because the oil is distilled mainly for its pinene content.

Constants (according to Penfold):

Specific Gravity at 15° C.	Around 0.9010
Optical Rotation	From − 25° to − 30°
Refractive Index at 20° C.	Around 1.4759

The constants are quite variable because of the different distillation timing followed by the distillers.

Constituents: 1-α-pinene (50 to 60 per cent.); d-eudesmol (about 30 per cent., but in some oils much less); cineol (9 to 11 per cent., but in some oils very little); phellandrene (but very little in some oils).

EUCALYPTUS STAIGERIANA

Vernacular name of the plant: The lemon-scented Iron Bark.

Occurrence: Limited to a very small area in the Cookstown district of Queensland.

Yield of oil: The fresh leaves yield 1.2 to 1.3 per cent. of oil; the dried leaves from 2.9 to 3.36 per cent.

Annual production: The oil has not yet been commercially exploited.

Quality of oil: An interesting oil because of potential value as a source of citral.

Odor: Its odor indicates the presence of citral, geraniol, geranyl acetate and sesquiterpenes.

Rectification: When properly rectified, a very fine oil resembling terpeneless lemon oil is obtained.

Constituents:

The Australian oil contains about 35 per cent. of citral and about 60 per cent. of l'limonene.

E. Staigeriana has also been planted recently in the Seychelles Islands.[1] Distillation of the leaves yielded 3.87 per cent. of an oil which contained 40 per cent. limonene, 37 per cent. citral, 7.5 per cent. geraniol and 12.8 per cent. geranyl acetate.

CHEMISTRY OF EUCALYPTUS OILS

The chemistry of eucalyptus oils is discussed at length in Gildemeister and Hoffmann's text book, "The Volatile Oils," Third Edition, Volume III. Suffice it, therefore, to bring out in this paper only a few general features.

There seems to exist a biogenetic relationship between certain constituents, as pointed out by A. R. Penfold.[2] We mentioned previously (under MEDICINAL EUCALYPTUS OILS) that cineol usually occurs in association with pinene and terpineol. Similarly, in the industrial oils phellandrene is generally found associated with piperitone and small quantities of its accompanying alcohol, piperitol. The phenolic and aldehydic compounds such as australol, cuminal, phellandral and cryptal, which occur in the rectification residues of mallee oils are normal constituents of *all* mallee oils, no matter from what species derived. Generally they are found associated with cymene and a form of phellandrene, which relationship is very helpful in the investigation of new oils.

The influence of climate, soil, location and particularly sunlight upon the formation of essential oil in eucalyptus plants was demonstrated by H. Deel.[3] Comparing French oils with Australian oils, Deel found that in the case of several species the yield of the French oils was quite inferior to that of Australian oils, their cineol content lower and their phellandrene content higher. According to Deel, cineol is formed from phellandrene by oxidation, and the comparatively low percentage of cineol in French oils seems to indicate that the biochemical processes in the eucalyptus plants of France are slowed up, probably because of less sunlight.

Berry, Macbeth and Swanson[4] studied the chemical composition of oil of *E. cneorifolia* distilled from young leaves harvested at different periods of the year. Among other things, they found that at the end of spring and beginning of summer, that is, during the period of maximum growth, yield of oil and content of hydrocarbons are highest. At that time the oils contain phellandrene which otherwise is not present in oil of *E. cneorifolia.* The content of phellandrene diminishes as the season progresses. The percentage of aldehydes is lowest during spring and early summer. Thus, the authors came to the conclusion that in the course of summer the originally present β-phellandrene is oxidized, under the influence of sunlight, to 4-isopropyl-cyclohexene-2-one-(1) and finally to the aldehyde phellandral. The authors further showed that the oils distilled from young leaves contain 1-α and 1-β-phellandrene. Oil from leaves collected in September contained 19 per cent. p-cymene, which amount was reduced to from 3 to 4 per cent. as the season progressed. The cuminic aldehyde present in the oils originates either from dehydration of the phellandral or from α-phellandrene or p-cymene. The authors could not identify any cryptal in the samples examined.

1. *Perfumery & Essential Oil Record* 29 (1938), 127.
2. "The Chemistry of Eucalyptus Oils," *Environment,* Oct. 1934, 20.
3. *Bull. Soc. Chim.* V. 4 (1937), 79.
4. *Journ. Chem. Soc.*, 1937, 1443.

ADULTERATION

Adulterated eucalyptus oils are sometimes encountered on the market. Adulterants usually consist of fractions of eucalyptus oil which had served for the manufacture of cineol. These fractions still contain a fairly high percentage of cineol and, therefore, lend themselves very well to sophisticating eucalyptus oils. Certain camphor oil fractions with constants similar to those of eucalyptus oil are also used as adulterants. The most dangerous one is the so-called Formosa (Japanese) eucalyptus oil which is a certain fraction of camphor oil with a very high cineol content (up to 85 and even 90 per cent.) and other physical and chemical constants closely resembling those of eucalyptus oil. This so-called Formosa eucalyptus oil has nothing whatever to do with true eucalyptus oil but, because of the chemical similarity between the two, additions of Formosa oil to genuine eucalyptus oil can hardly be discovered by analytical means. The nose of an expert, however, can readily detect a certain camphor and camphor oil by note in such fraudulent mixtures.

DETERMINATION OF THE CINEOL CONTENT OF EUCALYPTUS OILS

Of the numerous methods that have been proposed for determining the percentage of cineol in eucalyptus oils, the method of Kleber and Rechenberg and the method of Cocking have proved most valuable.

According to the Kleber and Rechenberg method, the congealing point of the oil itself is determined, from which the cineol content may be determined by reference to a table or graph. The presence of oxygenated constituents other than cineol in eucalyptus oils has little effect upon the values obtained; an accuracy of about ± 1 per cent. may be obtained. The United States Pharmacopoeia, Eleventh Revision, makes use of this method to assure sufficient cineol in eucalyptus oils: "the congealing point of oil of eucalyptus does not fall below $-15.4°$ C., indicating not less than 70 per cent. of eucalyptol ($C_{10}H_{18}O$)." For a complete description of the technique for this method, the reader is referred to Gildemeister and Hoffmann, "The Volatile Oils," Third Edition, Volume I, page 769.

The main criticism of the Kleber and Rechenberg method is the inconvenience of working at greatly re-

duced temperatures. The exact determination of a congealing point at a temperature much below 0° C. also presents some difficulty.

The method of Cocking offers certain definite advantages. The procedure to be followed is outlined briefly below:

To 3 grams of the eucalyptus oil, previously dried, are added 2.1 grams of pure o-cresol. The congealing point of this mixture is repeatedly determined until two concordant results are obtained. The cineol content corresponding to this congealing point is then found by interpolating in the proper table.

Since the congealing point is well above room temperature, the determination is greatly simplified. Results are easily reproducible. The accuracy is approximately ± 3 per cent. for eucalyptus oils, according to Cocking.

This o-cresol method has been accepted as the official method of the British Pharmacopoeia 1932, wherein a more complete description of the technique may be found. The use of calcium chloride for drying the oil as suggested by the B. P. is not to be recommended; anhydrous sodium sulfate is much to be preferred, eliminating the possibility of formation of addition-products with primary alcohols that may be present in the oil.

It is to be noted that relatively high cineol contents give more accurate analytical results in both methods. Therefore, if the cineol content of the oil is low, the determination is best carried out on a mixture of equal parts of oil and pure cineol. The cineol content of the oil itself may then be calculated from the value obtained.

USES OF EUCALYPTUS OILS

I. Medicinal and Pharmaceutical Oils

The employment of eucalyptus oils with a high cineol content in pharmaceutical, medical and dental practice is well known, and many standard formulas have been published in literature. Suffice it to enumerate here the most important uses.

(1) As a curative for coughs, colds and influenza.

(2) As an inhalant in the treatment of bronchial or nasal catarrh. A. R. Penfold suggests augmenting the efficacy of eucalyptus oil by the addition of 5 per cent. menthol.

(3) As a liniment in the treatment of rheumatism, lumbago, sciatica and general muscular pains.

(4) As a liniment in the treatment of sprains, strains, and bruises.

(5) As an antiseptic in the treatment of cuts and wounds.

(6) As a soothing application in the treatment of burns and scalds.

(7) As an astringent before and after shaving.

(8) As a mouth wash, when a few drops are diluted in a glass of warm water. Particularly valuable after dental operations to prevent infection and to heal the gums.

(9) As an antiseptic deodorant and purifier in the form of room sprays.

(10) As a foot bath when added to soapy water.

(11) Admixed with olive oil for rubbing the body.

(12) As an insecticide.

(13) As an antiseptic and healing application for treating the wounds of horses, cattle and sheep.

II. Commercial Eucalyptus Oils

The application of industrial eucalyptus oils, especially *E. dives* Type and *E. phellandra*, is comparatively little known and undoubtedly these oils could be used to far greater extent if their merit in domestic and industrial life were better understood.

III. Perfumery Oils

The employment of perfumery oils, such as *E. citriodora*, for scenting of soaps and numerous technical products or for isolating important aromatics needs no special explanation.

(1) Disinfectant.

Preparations of technical eucalyptus oils with rosin soap as emulsifying agent are valuable as germicides in disinfecting theaters, sick rooms and so forth. For general disinfecting most people prefer them to the coal tar preparations. The following mixture[1] is easy to make and comparatively cheap:

100 lbs. oil of *E. phellandra* or *E. dives* Type.
100 " W. rosin.
50 " of a 25% caustic soda solution.
150 " water.
20 " methylated spirit.

The procedure is first to prepare the soap by dissolving the rosin in the caustic soda solution and then diluting it with half the quantity of water. The soap solution is allowed to cool a little and then the oil is gradually stirred in. The balance of water is added while the mass is still warm. After cooling, the methylated spirit is stirred in. An addition of 2 pounds oil of *E. citriodora* greatly improves the odor. The product is then ready for use by simple dilution with water from 10 to 100 times its volume.

The formula can be modified in many ways, for instance by incorporating a percentage of phenol or cresol. Should the preparation be somewhat too sticky for more refined use, the rosin soap may be partly or entirely replaced either by regular household soap or by oleic acid soap. For example:

250 lbs. oil of *E. phellandra* or *E. dives* Type.
105 " commercial oleic acid.
60 " of a 25% caustic soda solution.
300 " water.
60 " methylated spirit.

These disinfectants have the great advantage of being non-poisonous and non-corrosive.

Such products are extremely popular in Australia, and many people make a living by preparing them in their homes and selling them from door to door. It is a real home industry which has sprung up all over that continent, and anyone who has enough money to buy

1. Penfold and Morrison, "Uses of Commercial Euca yptus Oils," Bulletin No. 17, Technological Museum, Sydney.

a few pounds of the necessary ingredients and a few pots and pans can start a little business of his own.

Some of these products are put up in very attractive bottles and used for hygienic purposes in the bathroom. Others are fast replacing lysol in hospitals and maternity homes, mainly because they are non-injurious to the tissues of the skin. They can be used even in their crude state without danger.

(2) Cleanser of the hand soap type.

Mr. A. J. Bedwell[1] of Sydney recommends the following formula:

Eucalyptus disinfectant or cleanser.

4 gals. commercial castor oil.

4 gals. oil of *E. phellandra.*

6 lbs. caustic soda of good quality.

The equipment necessary for preparing this product consists of a simple mixing vat of about 30 gallons capacity mounted on a gas ring or primus stove. An oil drum will serve as mixing vat.

The castor oil is heated to 60° C. and a solution of 6 pounds of caustic soda in 4 gallons of water is added. When the temperature has reached 90° C. or when the mixture is clear, the heat is shut off, 4 gallons of water are added and stirred well. The eucalyptus oil is slowly stirred in and, when it is well incorporated, sufficient water is added to make up 24 gallons.

This preparation should have a Rideal-Walker coefficient of 3, but when dissolved in water the coefficient is lower. To keep it at 3, from 2 to 3 per cent. of thymol must be added.

By using castor oil as a base, any type of eucalyptus oil can be used and even as much as 50 per cent. can be incorporated.

Mr. Bedwell also recommends the following formula:

Eucalyptus liquid soap.

4 gals. oleine (low clouding point).

5¼ lbs. caustic soda.

16 lbs. eucalyptus oil.

The oleine is heated to a temperature of 60° C. and a solution of 5¼ pounds of caustic soda in 1½ gallons of water is carefully stirred in. Sufficient water is added to make up 30 gallons. Heating is continued until all the soap is dissolved. The eucalyptus oil is added very gradually, with constant stirring, while the mixture is still warm. The finished product should have the consistency of honey.

It is not generally known that oil of *E. dives* Type and oil of *El phellandra* are excellent solvents of tar, grease, paint, India rubber, varnish and so forth. It would probably be somewhat too expensive to use the oils in concentrated form but a 10 or 20 per cent. solution of these oils in kerosene makes a very efficient preparation. Every motorist should have a small bottle handy in his car or garage. It not only serves for cleaning the hands but also for removing grease from various parts of the car—the wheels, for instance.

(3) Cleaner.

Technical eucalyptus oils form the base of many preparations useful for renovating tapestry, furniture, automobile upholstery and textiles in general. Eucalyptus oils of higher cineol content give especially good results in this connection. A few drops on a cloth will clean delicate fabrics.

Old paint and varnish brushes can easily be renovated by soaking in *E. dives* oil.

Eucalyptus oils can also be recommended as efficient solvents for many of the varnish resins and for commercial waxes such as ceresin, carnauba and so forth. *E. phellandra* oil is extensively used in floor polishes; it is also a good solvent for aluminum stearates.

(4) For mineral flotation.

Oil of *E. dives* Type and *E. phellandra* are extensively used in Australia in the separation of metallic sulfides by the so-called flotation process, *E. dives* being most efficient for silver-lead ores.

(5) Fruit spray.

Promising experiments have been carried out for utilizing eucalyptus oils as fruit sprays. Further work with these oils for controlling scale fungus growth and insect pests is advisable.

(6) Paint remover.

The ordinary paint and varnish removers, which usually consist of benzol, volatile thinners and paraffin wax, can be made much more efficient by the incorporation of oil of *E. phellandra* or *E. dives* Types. For example:

300 cc. benzol (90%).
100 cc. oil of turpentine.
200 cc. methylated spirit.
400 cc. oil of *E. phellandra* or *E. dives* Type.
100 gs. paraffin wax.

– or –

200 cc. benzol (90%).
100 c.c of oil of turpentine.
100 cc. methylated spirit.
150 cc. oil of *E. phellandra* or *E. dives* Type.
50 gs. rosin.
25 cc. of a 25% caustic soda solution.
50 gs. paraffin wax.

(7) In sheep fly repellents.

There exist in Australia many preparations for combating the ravages of the blow fly. So far oil of *E. dives* has been the most effective substance used in this connection. According to Penfold and Morrison[2] the efficacy of these preparations rests mainly with the selection of a suitable fixative for the essential oils. In other words, the problem is to retain the *E. dives* oil in the wool for as long a period as possible. In this regard, we call attention to the high boiling residues resulting from rectification of oil of *E. ploybractea* and *E. cneorifolia*. These residues are not only fixatives but very effective disinfectants as well, due to the presence of certain phenols and aldehydes of high germicidal value.

(8) As an antiknock in gasolines.

The recent literature has reported a new use for phellandrene isolated from certain eucalyptus oils: it is claimed that the addition of small amounts of this material to gasolines acts as an efficient antiknock agent.[3]

Due to present political conditions in the Far East, the United States may be cut off for quite some time from regular sources of supply for citronella and lemon-

1. Private communication.

2. "Uses of Commercial Eucalyptus Oils," Bulletin No. 17, Technological Museum, Sydney.

3. *Ind. Eng. Chem.*—News Ed. *20*, 106 (1942).

grass oils. Thus, it is advisable, in fact imperative, that these oils be produced in the Western Hemisphere. In this connection, we should also consider the planting of certain eucalyptus species, particularly *E. citroidora*, the oils of which are similar to the two grass oils.

FURTHER TUBE RESTRICTION

WPB has amended its order restricting the use of collapsible tubes. In conservation order M-115, as amended October 5, 1942, a tube is defined as "any collapsible container in the shape of a tube, including but not limited to any such container made in whole or in part of tin, lead, or any combination thereof, and includes closures, crowns and caps for such tubes."

Pure tin tubes may be used only for:

1. Preparations compounded extemporaneously for dispensing by pharmacists on legally constituted prescriptions of physicians, dentists, or veterinarians.
2. Ointments and other preparations for ophthalmic use.
3. Sulfonamide ointments and blood plasma.
4. Diagnostic extracts (allergens).

Tubes containing seven and one-half per cent. of tin may be used for:

1. Medicinal and pharmaceutical ointments not specified under pure tin tubes.
2. Preparations intended for introduction into body orifices (nasal, vaginal, rectal, surgical jelly, etc.), not included under pure tin tubes.

Tubes containing five per cent. of tin can be used for dental cleansing preparations.

Tubes containing one and one-half per cent. of tin may be used for shaving preparations.

Restrictions are placed on the amount of tubes which may be used for dental cleansing preparations and shaving preparations as follows: No user shall pack in tubes, during each of the three month periods beginning April 1, 1942, July 1, 1942, and October 1, 1942, respectively, more than 100 per cent. of the aggregate of both types of preparations which he packed in tubes during the corresponding three month period of 1940, or at his option no more than 25 per cent. more than the aggregate of both types of preparations which he packed in tubes during the whole of 1940, provided, that no tube user shall pack in tubes during the period between April 1942 and December 1, 1942, more than 100 per cent. of the aggregate of both types of preparations which he packed in tubes during the last nine months of 1940. All percentages mentioned are based upon volumetric weight, and the percentages are in addition to the products packed in tubes and sold to the Army, Navy, and Coast Guard, and in addition to products packed in tubes containing no tin or containing tin present as an impurity to an extent not greater than 0.5 per cent.

Under the amended order, retailers are forbidden to sell dental cleansing preparations or shaving preparations packed in metal tubes unless they obtain in exchange a metal tube of any kind for each metal tube sold.

TOXIC DRUGS

The Food and Drug Administration has ruled that certain products have such toxic potentialities that they may not be used even on a doctor's prescription. Products now included in this group are: Dinitrophenol, dinitrocresol, and derivatives of these two products, diethylene glycol, ethylene glycol, carbitol, cellosolve, and all other glycols except glycerin and propylene glycol if present in drug products in appreciable quantities.

DOMESTIC TITANIUM

While titanium supplies have been short due to the inability of importing ores from Travancore, India, the chief source of supply, and from lesser sources such as Norway, Senegal, and Brazil, domestic sources are supplying the country with its needs. Hundreds of tons of ilmenite are being mined daily in the heart of the Adirondack Mountains in New York State. This ore is moved by giant trucks to a crushing plant, from which it is carried on a conveyor to a wet mill where it is ground in rod mills, after which the magnetite is taken out by magnetic separators. About 40 per cent. of the ore is magnetite. The remainder is then treated on reciprocating ore dressing tables where most of the tailings are removed. The partially finished ilmenite concentrates are then dried and fed to powerful magnetic separators, which remove any remaining waste rock from the ilmenite or titanium ore.

Flavoring Vehicles

(Continued from page 403)

the case of dangerous drugs, or as a means of differentiating the various preparations used by individual members of a household.

Of course many flavoring vehicles have a distinct color of their own, but color can be added when required. Official, natural coloring preparations are available for this purpose, and in addition there are any number of synthetic colors that can be used; e.g. the FDA certified colors. The coloring material used must be chosen with care since they are readily effected by the pH of the fluids to which they are added.

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MERCHANDISING NEWS and PACKAGING NOTES

RETURNED GOODS ET AL: The WPB limitation order on cosmetics brings several things in its wake, things which will have far-reaching influence upon cosmetic marketing practices. One of the first is the returned goods problem—that hardy perennial which somebody always wanted to do something about but about which nothing was ever done. Now, however, under the lash of quota restrictions, something is being done.

Manufacturers are pointing out to their retailers in letters which take a fairly firm tone, that the quotas established by WPB are based upon *gross shipments* during 1941 and that the effect of returned goods is to reduce said quotas. Therefore manufacturers are announcing that merchandise will not be accepted for credit or exchange unless (1) it is unsalable due to fault in manufacture or (2) has become unsalable due to causes other than faulty manufacture. However, even goods in either of these classes must follow certain procedures specified by the manufacturer before they are accepted as returned goods and in the case of class (2) the retailer must pay for the transportation and usually a service charge to boot for reconditioning the merchandise. And, in neither case, do they really become returned goods for the retailer gets them back and has to sell them to get rid of them.

This is a far cry from the days when powerful retailers wrote their own tickets on "returned goods." What it amounted to in a great many cases was that the retailer accepted all merchandise on a *de facto* consignment basis. For even with the goods bought and paid for he could always ship back anything he didn't sell and usually no questions asked.

The quotas are also creating other interesting developments. Many retailers are resenting the quick adoption of "seller's market" policies. They point out that 1941 was a darn good year and in order to set the high sales record for that year the manufacturers had to work and plan and strive with all the ingenuity of which they were capable. Now, these retailers say, with practically the same quota to make and in the midst of war, higher taxes and emphasis on saving, the manufacturers are apparently assuming that they have to do nothing, that sales will continue at the 1941 rate without their giving the retailer any of the sales helps with which they were so lavish in 1941. The manufacturer who assumes that making his quota is easy sailing and that the retailer may now be safely ignored is riding for a fall, in the opinion of those retailers who are honestly convinced that it isn't going to be easy.

GLASS PACKAGES: To save tin, shave creams in tubes are disappearing. Colgate and Palmolive brushless preparations are now being featured in glass jars. They hold exactly the same amount and sell at exactly the same price as the giant brushless tubes. The Mennen Co. is also launching an aggressive campaign on its brushless and lather shave creams in glass jars. In outlining the campaign to the retail drug trade, Mennen points out that a promotion of shave cream in glass jars will help cure that "tube trade-in headache."

MORE BRITISH EXPERIENCE: In 1940 with the war two years old toilet goods and drug advertising in England dropped only 12 per cent. below 1939, which had shown a lesser drop from 1938. There are those who say that 1942 may reverse the moderate downward trend.

The British cosmetic limitations order was renewed on July 8 for a five month period. Face powder and talcum powder were free from control for this new period as their raw materials were not in short supply. However, to be free from quota control they must be produced in factories situated in areas where there is not an outstanding demand for labor for war production.

The quota for the new period will be 20 per cent. but "There will be a quota of 50 per cent. for firms which participate in approved concentration or re-concentration schemes and are in or move, with the approval of the Factory Control, to areas stated by the Ministry of Labor to be those in which there is not an outstanding demand for labor for war purposes.

"All manufacturers, whether registered or not, would be required as from August 17 to put their name and address on all controlled cosmetics and toilet preparations manufactured by them. This is in order to assist in the control of the black market."

"SHAPELIP:" In the spring of this year Coty experimented with a gadget called "Shapelip," which is currently being placed on the market. "Shapelip" applies lip color thinly, evenly, where and how it is most wanted. "Shapelip" can give bold, broad color strokes or thin, pencil-precision. The color is softer than the conventional lipstick. The lip paste in "Shapelip" is at all times completely encased in plastic where no dirt or tobacco crumbs can get at it. It is economical, too, for only the slightest amount need be pushed out of the plastic applicator with the adjustable screw base for one complete application. Unlike ordinary lipsticks, it cannot be withdrawn back into the case, so that it should not be pushed higher than the edges of the tube. "Shapelip" is available in all the Coty "Sub-Deb" lipstick shades, and retails at $1.25.

GAS KITS: Northam Warren introduced the "sniff kit" early this spring, a kit designed for training civilians to detect and identify various types of poison gases. The simulated gas charge in the bottles was developed jointly with Van Ameringen-Haebler, Inc. The price of the sniff kit was $5, which actually put it out of range of the average person. It was undoubtedly meant for air raid warden centers where it would be available to more than one person. Along about the same time, Fritzsche Brothers Inc. developed a war gas identification kit which they presented to state-appointed instructors in war gas identification with their compliments as a contribution of the firm to the war effort. The kit contained simulations of phosgene, Lewisite, mustard gas, chlorpicrin, and chloracetophenone, as well as a blower which enabled an instructor to disseminate the odors as a fine vapor.

The idea of the gas kit has now been made available to the general public by Harry E. Pfaltz who has assembled five harmless simulations of real poison gas odors in a kit which retails for $1. Each kit contains also a pamphlet giving detailed information about the gases imitated and protection from them as well as a package of smelling tabs made from absorbent paper to be dipped into the liquids for sniffing.

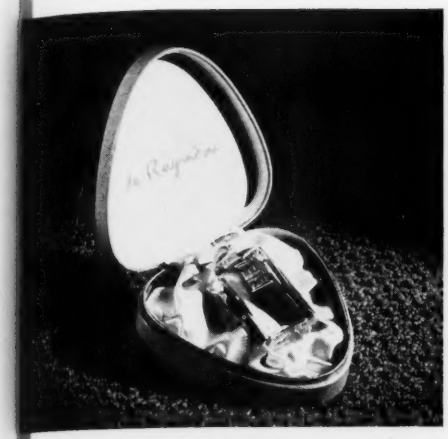
THE COSMETIC TREND: There is a growing sale today of cosmetics to civilian and semi-civilian customers which depends almost entirely upon conditions created by the war. Civilian customers, working in war plants, are developing specific needs which have a noticeable effect upon cosmetic counters in most industrial centres. Buyers in such cities as Detroit, Cincinnati, Chicago, Los Angeles (and their number is growing) feel that this market is only imperfectly covered by even the larger cosmetic manufacturers and almost entirely overlooked in their advertising. As 5,000,000 women are expected to enter industrial employments this is a serious omission and it can only be imperfectly compensated for by promotion of the store's own making. Cleansing aids take first place among the industrial war workers cosmetic needs. Other important items are deodorants, protective creams, talcums, hair aids and practically any type of bath room necessity. Good sellers also are pocket make-up articles. Much of the war workers attitude to their cosmetic purchases can be learned by talking to them in their free hours or over the counter. Buyers wish that the advertising writers of the leading cosmetic manufacturers would do so because they look upon this industrial worker trade as one of the most promising developments in recent months.

The semi-civilian war worker who rates a smart uniform and may be anything from an ambulance driver to an O. C. D. office aid is better taken care of in cosmetic advertising. However the girls who do the actual selling to this type of customer wish advertising writers would lay-off the "sissy" type copy. These uniformed war workers are hard-headed women and girls and their approach to the selection of a cosmetic is intensely practical. They want small things that go into uniform pockets during service and corrective aids for the dressing table. They buy eye shadows not because they want to look sophisticated but because they help break road glare while driving.

Both groups of customers are interested in all types of protectives. Buyers, in consequence, are responsive to novelties in this field and anything that a manufacturer can show finds ready trial upon the counters. They are an undisputed necessity in certain employments.

PARFUMERIE DE RAYMOND

Parfumerie de Raymond presents a new packaging for Mimzy in 1/4, 5/8 and 1 1/4 ounce sizes. A heart-shaped box in delicate pink and gray holds the popular Mimzy fragrance, nested in luxurious pink satin.



PARFUMERIE DE RAYMOND

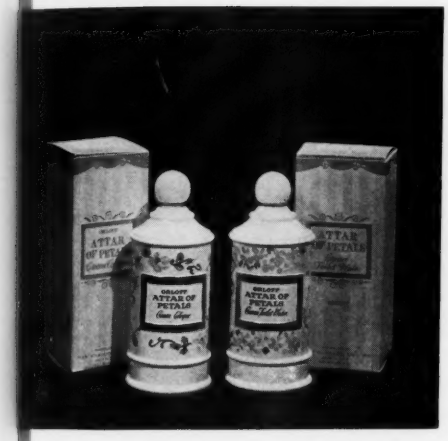
SCHIAPARELLI

Sleeping Blue pillows, fragrant with Schiaparelli's perfume, make charming cakes of soap for guest room or daily use. A fitting companion is Schiaparelli's new Sleeping dusting powder, in a generous blue and gold box.

SCHIAPARELLI

ORLOFF

Orloff "Attar of Petals" Apothecary Shop toiletries now include cream cologne and cream toilet water, in dainty hand-painted apothecary jars copied from antiques. They are non-alcoholic and slightly emollient, and can be used as after-bath lotion, make-up base, or for fragrant skin protection from harsh weather.



ORLOFF

REVLON

Revlon has designed a new jacket for its Mrs. Miniver Rose carton for single bottles and also for the double feature which is a combination box holding polish and small-sized basecoat Adheron. Bright red lettering and borders are contrasted against a gray background. Mrs. Miniver Rose lipstick comes out in the new plastic case, looking exactly like the Revlon metal case in style and color. The Double Feature box has been arranged for this shade promotion with a platform to hold the bottles and give complete visibility when the top is removed for display.

REVLON

MASSENET

The fragrant bouquet of America's rich woods and flowers inspired Massenet to create a perfume which has been appropriately named Bouquet Américain. This lovely fragrance, handsomely packaged, comes in one size only, one ounce. Triple cologne in Bouquet Américain is available in a four ounce size.

MASSENET

L'ORLE

L'Orle's "My Own" beauty kit holds three acquaintance size bottles of "Milk of Cologne"—one is an overnight emollient for face and hands, another is for after bath, and the third is for cleansing and a powder base.

L'ORLE

REPORT ON PACKAGING: Last month, at the meeting of the American Chemical Society, Dr. A. H. Warth, of the Crown Cork & Seal Co., presented a brief resume of some of the war-enforced packaging developments. He said that,

"In the cosmetic field WPB regulations ban the use of tinplate closures for jars. No new metal can be secured to make more of them. There had been a tendency to go from a glass container to a plastic container, but scarcity of plastics has reserved the trend. Glass containers with glass closures are receiving serious consideration.

"The technical research section of the Containers Branch of WPB is reported as drawing up exact specifications for drug containers, avoiding the use of metal as far as possible. Among items considered are those for tooth powder, tooth paste, aspirin, laxative lozenges, in which 35,000 tons of steel are annually used, according to Deputy Chief Charles L. Sheldon. The familiar cobalt blue glass container used for many purposes is out, since cobalt was placed on the critical list. It is being replaced by flint glass for the duration of the war.

"Collapsible tubes used 3,300 tons of tin in 1939. Although the collapsible tube business has enormously increased since then the tonnage of tin used this year will be far less than in 1939. Collapsible tubes of aluminum have disappeared from the market. The collapsible tube of tin has been largely replaced by tin-lead alloy tubes or tin coated lead tubes, thus saving about 70 per cent. of tin.

"For certain hygienic preparations pure tin is still considered essential. However, it should be possible to develop a collapsible tube of a lead-silver alloy containing up to 3 per cent. silver that would offer the chemical resistance of tin, and to plate this on the inside with a silver-indium alloy. Indium has, however, no official approval as to non-toxicity.

"Much thought is being given by the conservationists to the comparative amount of steel, tin, and rubber in cans, and that in the glass container closures. A base box of steel plate will yield 265 cans of a quart capacity; the same amount of steel will, however, yield 14,400 closures for quart-size glass containers. Transfer from steel to glass containers is not so advisable where the closures for the glass require as critical a material as rubber.

"Significant changes in the trend can be met with daily, a popular brand of molasses is now packed in glass with tear off metal and cork cap instead of a can; spices in cardboard cylinders with metal ends; instead of all tinplate canisters; noodle soup mixes in cardboard and cellophane, or in very thin metal foil-covered cardboard cartons; a very popular brand of baked beans formerly in tin is now in glass; some baby foods are now in glass instead of tin. Frozen egg liquid is now being packed in cellophane-lined paperboard carton instead of the customary tin can. The new container with its leak-proof cellophane bag inside is a rectangular-shape fiberboard box. Its chief advantages are that the frozen eggs may be slipped out in a block and readily melted; it is less costly than the tin can, and it saves much space in car because of its rectangular shape."

PLASTIC COLLAPSIBLE TUBE: The Celluplastic Corp., Newark, N. J., announces that it has developed a new plastic collapsible tube which has undergone product tests for a period of over a year, and is now ready for marketing. Herman B. Lermer, president of the company, states that there were many technical problems in the development and production of this tube. Extensive laboratory tests were conducted in conjunction with Colgate-Palmolive-Peet Co., Ortho Products, and Chesebrough Manufacturing Co. The manufacture of a plastic tube presented many serious problems, particularly in maintining a thin uniform wall that would give the required flexibility and, at the same time, maintain its roundness so that it could be run through standard production line equipment. The necessary equipment for obtaining these results was developed in the plant of the Celluplastic Corp. Another problem that presented itself was the printing on this tube so that the ink would adhere properly to the plastic.

At the present time, the tubes are sealed by metal clips but a special process has been developed by Celluplastic Corp. whereby the metal clips will be eliminated entirely and the tubes will be sealed by heat and pressure. This will eliminate the use of any metals whatsoever and make the tube a complete plastic tube in all respects. This new method will be available in about sixty to ninety days, at which time all tubes will be sealed by heat and pressure on the regular standard line production equipment.

Special internal treatments are given to these tubes, depending upon the nature of the product going into the tubes. Numerous products do not require this internal treatment.

Consumer acceptance tests were conducted by Colgate-Palmolive-Peet Co. and the results were found to be very satisfactory. There is no necessity for returning this tube in order to purchase another one.

LENTHERIC

"Merry, Merry, Merry"—Lentheric's gay little Christmas tree laden with perfume treasures—petit flacon each of A Bientot, Confetti and Tweed, each a miniature reproduction of the large perfume flacon. The red and gold box is decorated with a glittering gold-tone boutonniere and tied with a festive red bow.

LENTHERIC

COSMATA

Cosmata's pine-scented Showerub is a creamy paste that comes in an attractive wooden bucket, designed especially for the shower. Showerub not only acts as a cleanser, but it provides a gentle massage, while its creamy lather, rich with oils, leaves the body tingling, refreshed, clean, with the skin soft and glowing.

COSMATA

SOFSKIN CO.

For the promotion of Christmas gift purchases, the Sofskin Co. offers a festively wrapped jar of Sofskin Creme. This velvety white cream is not only a softening and smoothing agent for counteracting the dry, harshening effects of manual work and exposure, it also helps guard the loveliness of hands while they are at work. It is delicately fragrant, without a trace of stickiness or oiliness.

SOFSKIN CO.

DOROTHY GRAY

The packages of Dorothy Gray's Mimosa scented bath series are as delicately decorated as this fresh, floral fragrance suggests—a pale harmony of soft yellow, blue and pink. This delightful fragrance is available in bouquet, dusting powder, bubbling bath, soap, and in several gift combinations of these products.

DOROTHY GRAY

LUCIEN LELONG

The cover of Lucien Lelong's perfume story book is of old rose satin with the title, "Fragrance by Lucien Lelong" delicately embroidered on it. The page inside is of blue satin and attached with grosgrain ribbon are four of Lucien Lelong's perfumes, Tailspin, Mon Image, Impromptu and Indiscrete. This beautiful case may also be used for handkerchiefs.

LUCIEN LELONG

LE SONIER

Le Sonier's latest creation is a beautifully made refillable Powder Mitt in military scheme. The face of the mitt is white bengaline, with blue piping and red and blue bow. It is attractively boxed especially for either a WAVE or a WAAC. A four ounce refill of delightful dusting powder is included with the package.

LE SONIER

Methocel

DOW METHYLCELLULOSE
PHARMACEUTICAL GRADE

REPLACES NATURAL GUMS WITH DEFINITELY BENEFICIAL RESULTS

METHOCEL*, Pharmaceutical Grade, is being used with excellent results in many applications which heretofore required natural gums, now unavailable under war time restrictions. Solutions of this water soluble cellulose ether thickener are clear, colorless, odorless, neutral, inert and resistant to fermentation.

METHOCEL, Pharmaceutical Grade, is a Dow product and possesses exceptional purity. This essential quality, together with characteristic Dow uniformity, makes it highly desirable for pharmaceutical preparations. Pharmaceutical manufacturers are invited to write for further information on this useful chemical which is one of the more recent additions to the Dow pharmaceutical list.

DOW

THE DOW CHEMICAL COMPANY
MIDLAND MICHIGAN

New York City, St. Louis, Chicago, San Francisco, Los Angeles, Seattle, Houston

DOW PHARMACEUTICAL CHEMICALS

*Trade Mark Reg. U. S. Pat. Off.

CHARBERT

Charbert's gift set offers a double delight, an exquisite flacon of perfume combined with an attractive eau de cologne drum bottle of the same scent, nestled in the folds of ivory satin and encased in an ivory box.

CHARBERT

MILKMAID

Milkmaid has introduced a bath line for the holiday season that is as romantic looking as it is practical. Old-fashioned cruets are used to hold bath oil and toilet water. One, of dainty milk glass decorated with tiny painted flower nosegays, is filled with fragrant bath oil, and the other of sparkling crystal brightened with painted flowers, contains toilet water. Both gifts are packaged in net-ruffled flower-sprigged white dimity boxes.

MILKMAID

ALLEN B. WRISLEY

Saddle Club packaging by Wrisley is in rich, deep tones of tan and brown with horse's head medallion trim. The set contains turned-wood bowl of shaving soap and a square cut bottle of after shave lotion with huge wooden closure. The fragrance is fresh and gingery.

ALLEN B. WRISLEY

PRINCE MATCHABELLI

Prince Matchabelli's newest cologne, full of Gypsy enchantment, is the Gypsy Patteran, inspired by the old custom of maids-in-love putting a garland of flowers on the ground to guide their loves. Gypsy Patteran cologne is packaged in a jingling tambourine.

PRINCE MATCHABELLI

SEAFORTH

Seaforth presents the Commando kit designed for use by men in the armed forces as well as civilian travelers. The Seaforth Commando kit contains three compact essential items—shaving lotion, men's talc and cologne—in a handsome, masculine package. A new type cylinder jug fits snugly into the kit which is made of heavy sturdy board to withstand wear. The top snaps across holding contents snugly in place. Insignia of all armed forces is smartly imprinted on it.

SEAFORTH

JEURELLE

Jeurelle's pyramid box of blue, in which rests a jewel-like glass perfume bottle with its cut glass flower stopper, is packaged for the holiday season in a square box tied with rose pink ribbon. The perfume scents include gardenia, white lilac, red carnation and apple blossom.

JEURELLE

NEWS

In Service

Northam Warren Promoted to Captain

Northam Warren, Jr., who is on leave of absence from his office as vice-president and sales manager of the Northam Warren Corp., Stamford, Conn., has been promoted to a captaincy in the Army. He is assigned to Fort Sill, Okla., and returned there early in September after a brief furlough to continue his duties as instructor in the Field Artillery School.

Schuster Commissioned First Lieutenant

Monroe C. Schuster, who for over ten years has been sales representative for Morny soaps, Revillon perfumes, and Knize Ten toiletries, has been commissioned a first lieutenant in the United States Army Air Force. He is in the same branch of service as he was in World War I. Lieut. Schuster expects to be in Miami, Fla., for six weeks and will then be stationed at Maxwell Field, Ala.

Philip Smith in Army

Philip C. Smith was sworn into the United States Army on September 15 and left for active duty on September 28. He has been with Yardley & Co., New York, for eight years, the past two as advertising manager and a director of the company.

Millard Commissioned Lieutenant (J. G.)

Nelson Millard has been commissioned a lieutenant junior grade in the United States Navy. He reported to Treasure Island October 5 for indoctrination. Mr. Millard has been with Bourjois, Inc., for more than twelve years, for the past two years as vice-president of the Bourjois Sales Corp. of California.

Fairhurst Joins Army

William S. Fairhurst, vice-president of Tombarel Products Corporation, of New York, who has been associated with the company since its inception, has enlisted in the U. S. Army and has been assigned to the Volunteer Officers Training Corps. He left for duty on September 30. Mr. Fairhurst is the son-in-law of L. J. Zollinger, president of Tombarel Products' Corporation. Mr. Zollinger's other son-in-law, F. E. Tucker, is also in the U. S. Army stationed at Sioux Falls, S. D.

WILLIAM S. FAIRHURST

Fink Enters the Navy

William S. Fink, director of sales for Peek & Velsor, New York, enters the U. S. Navy October 15, after being associated with the company for the past eight years.

War Effort

Retained by WPB for Cosmetics Research

The War Production Board, Washington, D. C., has retained Paul Cramer of Detroit, and Dorothy Cocks on the Staff of the Research and Statistics Unit, Drugs and Cosmetics Section, Chemical Branch. The unit chief is Dr. John N. McDonnell, and the unit operates under Fred J. Stock, chief, and C. A. Willard as deputy chief of the Branch.

Mr. Cramer, who has been appointed to the position of senior industrial economist, is a graduate of the University of Pennsylvania. He has for 20 years been associated with the Campbell-Ewald Advertising Agency of Detroit in charge of the research and analysis division.

Dorothy Cocks, who has been appointed Consultant to the Unit, is a graduate of Hunter College, and attended Cornell University and Columbia University. She has been advertising director of the Elizabeth Arden and Marinello companies, and is now advertising manager of Lehn and Fink Products, Corp., New York.

Squibb Gets Army-Navy E

Presentation of the Army-Navy "E" pennant to E. R. Squibb & Sons was witnessed by more than 2,000 employees in the grand ballroom of the Waldorf-Astoria Hotel, New York, September 18. The pennant was presented by Rear Admiral Harold W. Smith, (MC) USN, Chief of the Navy's Research Division of Bureau of Medicine and

Surgery, to Carleton H. Palmer, chairman of the Squibb board.

With the pennant went insignia of excellence to each of the employees of the company which manufactures critical drugs, biologicals, and other medical essentials for the armed forces. Brig. General Larry B. McAfee, assistant to the Surgeon General of the United States Army, presented token "E" buttons to four employees—three women and one man—selected from four Squibb departments in which service entails personal hardship and risk of health and even life in supplying of medical needs for the Army and Navy.

Abbott Gets Army-Navy E

Notification that Abbott Laboratories, as well as its New York branch, had earned the coveted Army and Navy award for its excellent record of producing medical supplies for the armed forces, was made in a letter to S. DeWitt Clough, president, from James Forrestal, Under Secretary of the Navy. The award consists of an "E" pennant to be flown above the plant and an "E" button or lapel pin for every Abbott employee.

Official presentation was made at an open-air ceremony, held on the Abbott grounds and attended by representatives of the Army and Navy, headed by Rear Admiral Downes, Commandant of the Ninth Naval District.

N. Y. Q. Gets Flag

The Treasury Department has awarded a Minute Man Flag to New York Quinine and Chemical Works, Inc. The record of employees subscribing to the purchase of war bonds through the payroll deduction plan in the N.Y.Q. plant shows that over 95 per cent. are enrolled.

Bristol-Myers Gets Flag

William H. Hassinger, deputy state administrator of the New Jersey War Savings Staff, U. S. Treasury Department, has awarded an official Minute Man flag with a "T" to the employees of the Bristol-Myers Co., concluding a one-week drive in which 100 per cent. of nearly 400 executives and workers pledged for war savings more than 10 per cent. of the total company payroll.

The drive employed two teams, one of girls, the other of men, who undertook to canvass the entire personnel of the company in one week's time. The team of men canvassed the women employees and the women's team canvassed the men.

Five bonds were put up by the company, to go to the group which pledged the higher percentage of its payroll. The women won and five women purchasers of War Savings Stamps and Bonds were selected by lot and presented with a $25 bond each. The losers were allotted two bonds and two men were chosen by lot.

Abbott Laboratories receiving the Army-Navy Production Award. Shown holding the "E" pennant are (left to right) S. DeWitt Clough, President of Abbott Laboratories; Col. F. C. Rogers, Commanding Officer at Fort Sheridan; Gov. Dwight H. Green; and Rear Admiral John Downes, Commandant of the Ninth Naval District.

Companies

Conklin With Evans

Walter Conklin has joined Evans Chemetics, Inc., New York, as private brand contact representative. He is

W. A. CONKLIN

vice-president of the Foragers of America, and is also one of the original BIMS members.

Anchor-Hocking Advances Knisel

E. L. Knisel, long associated with Anchor-Hocking Glass Corporation, is now acting manager of the New England territory for that company.

New Fries Offices

George G. Fries & Company, New York, and Fries & Fries, Cincinnati, have opened new offices at 13 East 37 St., New York.

St. Louis Wholesaler

United Wholesale Druggists of St. Louis, Inc., has filed with the Securities and Exchange Commission a registration statement covering issuance of 4,000 shares of no par value common stock expected to total $200,000. The stock is to be sold only to persons, and others engaged in the retail drug business in the area economically served by St. Louis.

Vaseline Name Defended

Hollywood Cosmetic Manufacturing Company are enjoined from using the name "Vanaline" as the result of a complaint by Chesebrough Mfg. Co., Con'd., who contended that the mark infringed the Chesebrough mark, "Vaseline." In the complaint, Chesebrough stated that the defendants had copied their label and simulated their color scheme and get-up in connection with defendants use of the word "Vanaline," all with the purpose of cashing in on Chesebrough's reputation in its well-known "Vaseline" Hair Tonic.

Orbis
BRILLIANTINE COLOR-ODOR
Combinations

These Color-Odor Combinations are of especial interest to manufacturers for the rapid and convenient preparation of Brilliantines.

One pint thoroughly mixed with 55 gallons of mineral oil **yields a crystal clear product . . . at a color-odor cost of 4 to 5½ cents per gallon . . . that is delightfully perfumed and colored, requires no filtration, and is ready for immediate bottling.**

They are manufactured from high grade perfume bases and certified colors in accordance with the Federal Food, Drug and Cosmetic Law.

Available in the following odors

BOUQUET	LILAC	ROSE
HONEYSUCKLE	NARCISSE	VIOLET

and in the following colors
RED and AMBER

Special odors available on request

PRICES
Series #150—$18.00 per gal., or $2.50 per pt.
Series #300—$24.00 per gal., or $3.25 per pt.

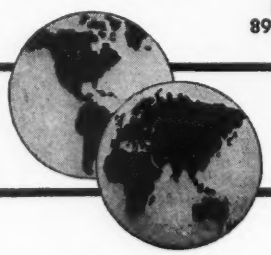
Samples of FINISHED Brilliantine available to interested manufacturers. State preference of color and quality desired.

ORBIS
PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK · FACTORY & LABORATORY, NEWARK, N.J.

CHICAGO 831 N. Wabash Ave.
PHILADELPHIA 610 Brown Bldg.
BOSTON 89 Broad Street
MEMPHIS, TENN. 1620 Carr Ave.

Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss



Sonneborn Sales Heads

Henry F. Copeland, formerly manager of sales for L. Sonneborn Sons, Inc., New York, has become chairman of the Marketing Committee of that company. R. W. (Bill) Bjork has succeeded Mr. Copeland as manager of sales. Edgar E. Brand, formerly Western District sales manager, has become director of sales with headquarters at Chicago, and Harold C. Green has been named Eastern sales manager.

Gampfer Heads Merrell Sales

Nelson M. Gampfer has been named general sales manager of the Wm. S. Merrell Co., Cincinnati. He succeeds Walter G. Hodge who has retired because of ill health.

George Orr, Jr., formerly assistant advertising manager takes over the post of advertising manager from Mr. Gampfer.

Two additions to the Merrell executive personnel have also been made known. Arthur M. Holmes, formerly of Parke, Davis & Co., has been made assistant to the president, Thurston Merrell, and Charles R. Mayers, formerly with Merck & Co., has joined the Merrell organization as assistant sales manager in charge of distribution.

Gramm and Baker—25 Years with Merck

Harry Gramm, packaging and shipping department, Rahway, N. J., and Guy A. Baker, Falls plant engineer, Philadelphia, have been made members of Merck & Co.'s Quarter Century Club. Mr. Gramm has spent all of his twenty-five years with the company as a bulk-weigher in the subdividing department. Mr. Baker was originally employed at the Powers-Weightman-Rosengarten Co. and worked at the Ninth St. and Thirty-fifth St. plants before going to the Falls plant in 1936.

Rippie Joins Monsanto

Charles W. Rippie, formerly petroleum technologist for the Solvay Sales Corp., has joined the petroleum chemicals department of the Organic Chemicals Division of Monsanto Chemical Co., St. Louis, where he will handle technical sales work.

Dr. Rippie has a broad background in the petroleum field, having served in research, manufacturing and sales capacities with the Shell Oil Co. and Cities Service Oil Co. before going to Solvay. He received his bachelor's degree in chemistry from the University of Michigan in 1919 and his doctor's degree from the University of Illinois in 1926.

Weber—50 Years with Lueders

Ferdinand Weber, vice-president and treasurer of George Lueders & Co., New York, completed fifty years of service with the company October 3, thus becoming the third member of the organization to celebrate his golden jubilee. The first was Jacob Gundlich, auditor, who completed fifty years of service in 1937, a few months before his death and the second was E. V. Killeen whose fiftieth anniversary was in January 1941.

Mr. Weber was given a dinner in the East Ballroom of the Hotel Astor which was attended by the entire organization including Robert Emmett Desmond, manager of the San Francisco branch, William F. Kammerer, manager of the Chicago branch, Wilfred Beauchamp, manager of the Montreal branch, George Sroka of the Chicago office, J. C. Weiler of St. Louis and William F. Kiefer of Philadelphia.

The directors of the company gave Mr. Weber a very handsome pair of diamond studded cuff links and the employees gave him a set of traveling bags.

Mr. Weber came to this country in September 1892 and soon thereafter entered the employ of George Lueders, founder of the business. According to pre-arrangement he was later admitted to the newly formed partnership, George Lueders & Co., which included George Lueders and Henry Heister. In 1906 when the present corporation was organized, Mr. Weber was elected director and also its vice-president and treasurer, which offices he has held continuously for thirty-six years.

War Gas Odors Packed for Instruction

A simple but effective kit including five small bottles, each containing an accurate, harmless simulation of a real poison gas odor, has been placed on the market by Harry E. Pfaltz, New York. These imitation poison gas odors designed for the instruction of first aid and civilian defense groups are prepared by Fritzsche Brothers and have been approved by the Office of Civilian Defense. They are made from aromatic chemicals and essential oils and the liquids are guaranteed entirely harmless to smell or touch. Each kit contains a pamphlet giving detailed information about the gasses imitated and protection from them as well as a package of smelling tabs made from absorbent paper to be dipped into the liquids for sniffing. The gases used are: Phosgene, having the odor of musty hay or green corn; Chlorpicrin, smelling like anise or flypaper; Tear Gas, which smells like fresh apple blossoms; Lewisite, scent of which resembles geraniums; mustard gas, which smells like garlic, horseradish or mustard. The Pfaltz set retails at $1. It will soon be on the market in department stores throughout the country.

Murphey With Bourjois

Roy L. Murphey has joined the selling staff of Bourjois and Barbara Gould. He was formerly sales manager of the T. J. Holmes Co. Inc., Chartley, Mass., and previous to that, sales manager of the Atomizer Division of the DeBilbiss Co. for many years.

England Joins Maurella

Maurice Handman, president of Maurella Products Corp., manufacturer and distributor of Xandra bath preparations, Lengyel's Essence Imperiale Russe and Mastin's Eye Lifts, has announced that Frank England now has charge of the laboratory, replacing Laszlo Lengyel who has resigned.

Emerson Advances Baldridge

Harold D. Baldridge has been appointed sales manager of the Emerson Drug Co., Baltimore. He has been assistant sales manager of the company since 1941 and, prior to that was assistant manager of the drug products department of Procter & Gamble.

Continental Can Advances O'Brien

Frank J. O'Brien has been made an executive vice-president of Continental Can Co. He will make his headquarters in New York. Mr. O'Brien has been a director of the company since 1938. Prior to that he had been vice-president in charge of manufacturing for six years, and before that was general manager of production.

Adkins Now Chemical Broker

William H. Adkins, with a background of more than twenty-one years in the essential oil, drug, and chemical business, is now operating as a drug broker with his office at 15 Central Park West, New York. In recent years, Mr. Adkins has been selling for Schimmel & Co. Previously he was at various times connected with Monsanto Chemical Company, and Givaudan-Delawanna for whom he acted as purchasing agent over a period of ten years.

Dr. Suter Joins Winthrop

Appointment of Dr. Chester M. Suter, professor of organic chemistry at Northwestern University and chairman of its department of chemistry, as director of chemical research of Winthrop Chemical Co., Inc., has been announced by Dr. Theodore G. Klumpp, president. He has already assumed his new duties at the company's research laboratories at Rensselaer, N. Y.

Dr. Suter was born in Dunnell, Minn., December 13, 1902. He received his A.B. in 1923 from Southwestern College, his M.S. in 1926 and his Ph.D. in 1927 from the University of Kansas. He spent the next year at Yale University as Metz Fellow with Professor Treat B. Johnson, and thereafter became associated with Northwestern.

Danilek With Dorothy Gray

Dorothy Gray, Ltd., announces the appointment of Joseph A. Danilek as "assistant to president" Joseph Keho, effective September 1. Mr. Danilek is well and widely known in this industry since he was with Helena Rubinstein, Inc., for ten years, and with Elizabeth Arden Sales Corp., for over four years. He acted as controller for each of these companies and in addition to his other duties represented Arden on the executive board of the Toilet Goods Association. His work in connection with tax problems and discussions conducted between the cosmetic industry and the Treasury Department has been described as especially valuable.

Viosterol Rights Available

The Wisconsin Alumni Research Foundation, Madison, Wisc., has announced that Vitamin D prepared by the Steenbock Irradiation Process is now generally available for use in vitamin preparations for human medicine. This new policy is a distinct departure from previous Foundation procedure when the use of Steenbock Vitamin D was exclusive with a limited number of pharmaceutical houses, which included Abbott, Mead Johnson, Merrell, Parke Davis, Squibb and Winthrop.

Prices of Foundation Vitamin D have been radically reduced and are among the lowest in the country. Testing present and new pharmaceutical products will be continued in the Foundation's laboratories to assure maintenance of the same high standards of dependability upon which prestige of and preference for Foundation-licensed products have been built.

Merck Advances Anderson

Carl M. Anderson has been appointed executive assistant to the president of Merck & Co., Inc. This is a new executive office established because of the war activities and expanded business of the company.

Mr. Anderson became associated with Merck & Co. in July 1934 as head of the legal department. He was appointed assistant secretary in June 1937 and, in

CARL M. ANDERSON

addition to the executive duties he now assumes, will continue as assistant secretary and legal department head. Prior to joining Merck, he was associated with the New York law firm of Root, Clark, Buckner & Ballantine.

Educated in the public schools of Grantsburg, Wisc., Mr. Anderson received his B.A. from the University of Minnesota and was graduated from the University of Minnesota Law School. He is counsel for the Drug, Chemical & Allied Trades Section of the New York Board of Trade, a member of the U. S. Supreme Court Bar, the American Bar Association, and several state bar associations.

Savaria of Economic Retires

Economic Machinery Co., Worcester, Mass., has announced the retirement from active duty of Napoleon Savaria, for many years Chicago representative for World Labelers.

H. N. Johnson, who has been associated with Mr. Savaria and Sven Strom, in charge of the World Labeler service in Chicago for many years, will continue at the same address, 410 Monadnock Building.

Sterling Products Name Change

The stockholders of Sterling Products, Inc., held a special meeting October 15 in Wilmington, Del., to vote upon a recommendation of the directorate that the corporate name be changed to Sterling Drug, Inc.

Pepsodent Advances Luckman

Charles Luckman has been named executive vice-president of the Pepsodent Co., Chicago. He has been vice-president and general manager for four years and previous to that was sales manager for three years. Henry F. Woulfe has been named general manager of the company. He has been with the company for fifteen years as production manager for the past four years, and as purchasing agent before that. Wilfred J. Eckman, assistant production manager, who has been with the firm for eleven years, succeeds Mr. Woulfe.

Sofskin Appoints Connolly

B. J. Connolly has been appointed by the Sofskin Co., Findlay, Ohio. Mr. Connolly will call on select retail trade.

Aquilera Leaves Dunhill

Flora Aquilera has resigned as vice-president of Mary Dunhill Inc. She had been associated with the company as designer and director of sales promotion since its inception in 1933. Prior to joining Mary Dunhill, Miss Aquilera was buyer of cosmetics and gifts at Bonwit Teller, New York, for many years.

Wilson Advanced by Monsanto

James A. Wilson has been promoted to the position of assistant plant manager of the Trenton, Mich., plant of Monsanto Chemical Co., it has been announced by Felix N. Williams, phosphate division production manager. Mr. Wilson was formerly superintendent of the company's Carondelet, Mo., plant. In his new post he will work under Edward A. O'Neal, Jr., plant manager.

Eugene M. Hetzel succeeds Mr. Wilson as superintendent at the Carondelet plant where he will work under Lee K. Cowie, plant manager.

After doing summer work for Swann Chemical Co. in 1928 and 1929, Mr. Wilson returned to Swann upon completion of a postgraduate course at Massachusetts Institute of Technology in 1931. He was in the research department of Swann when that company was absorbed by Monsanto and was later transferred to operations. In 1939 he went to Carondelet as superintendent.

Mr. Hetzel is a graduate of the University of Wisconsin and joined Monsanto at Anniston, Ala., in 1926 as a research chemist. He continued in that capacity until his transfer to the Carondelet plant in March, 1942.

Merck Training School

The Merck Training School, sponsored by Merck & Co., Inc., Rahway, N. J., has started classes in subjects essential to the war effort. All employees have been invited to attend the classes although enrollment is voluntary.

The training program is under the supervision of Ernest C. Bartell who, prior to his association with Merck & Co., was an instructor at Phillips Exeter Academy and director of personnel for the Allegheny Ludlum Steel Corp. of Pittsburgh.

Each class will meet once a week for a two-hour period, with thirty weeks making up a complete course. Among the subjects included in the program are chemistry, chemical equipment, shop mechanics, blueprint reading, power plant engineering, electricity, and such general business subjects as English, mathematics, and stenography. While all new employees are required to attend safety classes, first aid will be included on a voluntary basis.

During the past several months, about thirty power plant engineers and operators have been meeting in the school to study power plant work. Ten of these men are employees of Merck & Co., but others come from Eastern Aircraft, U. S. Metal Refining Co., the Singer Co., Hyatt Roller Bearing Co., and General Aniline Co. This course, originating with the Merck engineers, was recently made a part of the War Training Program conducted by Rutgers University.

Associations

Bohrer—Assistant to Dr. Kelly

Charles R. Bohrer, West Plains, Mo., has accepted appointment as assistant to Dr. E. E. Kelly, secretary of the American Pharmaceutical Association. He is making his office at the headquarters of the association in the American Institute of Pharmacy, Washington.

Mr. Bohrer is a member of the Board of Pharmacy of the State of Missouri, and this year is president of the National Association of Boards of Pharmacy. He is a graduate of the Kansas City College of Pharmacy and has practiced pharmacy for the past twenty-three years in the pharmacy founded by his father and since his death conducted by Mr. Bohrer and his brother.

He has been active in the work of the N.A.B.P., serving as chairman of its legislative committee, member of its committee on the status of pharmacists in the government service, chairman of its publicity committee, and as a member of other committees. He has served as a member of the Council, as vice-president and as president of the Missouri State Pharmaceutical Association and for four and one-half years he was secretary of the Board of Pharmacy of his home state.

Pharmaceutical Foundation

American Foundation for Pharmaceutical Education, an organization to improve the profession of pharmacy, has been incorporated in New York State. At an organization meeting held October 1, Dr. Ernest Little, dean of the Rutgers College of Pharmacy, Newark, N. J., was elected president of the Foundation. Other officers elected are: Vice-president, Charles S. Beardsley, of Dr. Miles Laboratories, Elkhart, Ind.; treasurer, S. B. Penick, of S. B. Penick & Co., New York; secretary, Dr. E. L. Newcomb, of the National Wholesale Druggists' Association. James J. Hoge has been named counsel of the organization. Officers will serve until the first annual meeting to be held in April, 1943.

The Foundation has for its purpose the supplying of well-trained graduates for retail pharmacies throughout the country, and the providing to pharmaceutical manufacturers, Government agencies, hospitals, and colleges of scientifically trained personnel. Incorporators of the Foundation are: S. B. Penick, of the American Drug Manufacturers' Association; Dr. E. L. Newcomb, of the N. W. D. A.; Charles S. Beardsley, of the Proprietary Association; Joseph Dreyer, of the F. W. D. A.; Robert Swain, of the N. A. B. P.; Harry Noonan, of the A. P. M. A.; Hugh Bernie, of the N. A. R. D.; H. Evert Kendig, of the A. A. C. P.; Charles Rogers, chairman of the executive committee of the A. A. C. P.; and Ernest Little.

BIMS Golf Winners

BIMS of New York closed the 1942 golf season at the Ridgewood Country Club, Ridgewood, N. J., September 22 with 100 members and guests on hand for the golf tournament and dinner. In presenting the golf prizes Martin Schultes, Hewitt Soap Co., chairman of the New York BIMS, stated that the gathering might conceivably be the last golf tournament for the duration. However, several dinner meetings will be held in New York during the coming winter.

Among the low scorers were Paul A. Dunkel, Paul Dunkel & Co.; Louis Bezard, Bourjois, Inc. and Ralph M. Stevenson, Givaudan-Delawanna Inc., for the members and Herbert Parker, guest of Harry Heister of George Lueders & Co. The other prize winners, all of whom received war stamps were: Ira P. MacNair, MacNair-Dorland Co., Inc.; Theodore M. Hanlon, CaronCorp.; C. B. Robbins, Allen B. Wrisley Co.; Harry G. Griffiths, Pennsylvania Drug Co.; George P. Dunn, Smith & Nichols, Inc.; Harris Whitaker, Bourjois, Inc.; Russell Boland, Topics Publishing Co.; O. Dexter Neal, Hilton Davis Chemical Co.; Walter L. Fretz, Dodge & Olcott Co.; Thomas Morgan, "Soap;" Lee Clemner, Topics Publishing Co.; Robert C. Spencer, Lowe Paper Co.; William F. Zimmerman, Helfrich Labs. of N. Y.; William Haebler, van Ameringen-Haebler, Inc.; Everett Proops, Proops Management, Inc.; Walter S. Nuckols, Swindell Bros.; Albert C. Burgund, Carr-Lowrey Glass Co.; W. Van Alan Clark, Allied Products; William H. Green, Addison Lithograph Co.; Joseph F. Kelly, Hagerty Bros. & Co.; Harry Heister, George Lueders & Co.; Herbert T. Georgi, Houbigant Sales Corp.; Walter Smith, Affiliated Products, Inc.; Peter L. Forsman, C. H. Forsman & Co.; Irving S. Goodwin, Yardley & Co. Inc.; C. R. Keeley, "Beauty Fashion;" Charles W. Darr, Harriet Hubbard Ayer.

Chemical Salesmen Golf

The Salesmen's Association of the American Chemical Industry held its final golf tournament of the season at the North Hills Golf Club, Douglaston, L. I., September 15. C. F. Alexander, chairman of the entertainment committee, made the arrangements and the attendance at the dinner reached the total of 130. The door prize—a $25 war bond—was won by Ira MacNair, MacNair-Dorland Co., Inc.

Winners in the golf tournament were: Low Gross Flight A—H. R. Miller, Hercules Powder Co.; Flight B—James Ferris, Niagara Alkali Co.; Flight C—E. J. Maguire, Grasselli Division E. I. duPont de Nemours & Co.; Low Net Flight A—Charles Slater, J. T. Baker Chemical Co.; Flight B—C. F. Trom-

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bley, Monsanto Chemical Co.; Flight C—P. W. Hiller, Innis, Speiden & Co. Inc. Guests Low Gross, T. Morgan, MacNair-Dorland Co.; Low Net, Harold Green, L. Sonneborn Sons Inc.

Members kickers—R. E. Wilkins, Hooker Electrochemical Co.; J. Huisking, Fritzsche Brothers Inc.; and P. J. LoBue, Michigan Chemical Co.; Guests—R. Christman. Longest drive—Charles F. Alexander, Seldner & Enequist, Inc. Least number of putts—Thomas Callahan, Wishnick-Tumpeer, Inc. Nearest to pin—S. F. Urban, E. R. Squibb & Sons. Members high gross—K. M. Osterndorf, Commercial Solvents Corp.

Phila. Drug Outing

The Philadelphia Drug Exchange held its fall outing at the Cedarbrook Country Club, Limekiln Pike at City Line, October 6. Golf in the afternoon was followed by dinner and entertainment and the awarding of prizes.

T.G.A. 1943 Meeting

The Toilet Goods' Association, Inc., has set May 4 and 5, 1943, as dates for its next annual convention. It will be held in New York at a hotel to be selected by the convention committee. L. R. Root, Scovill Manufacturing Co., has been appointed chairman of the convention committee and will select the other members of the committee.

Packaging Institute to Meet

The Packaging Institute, Inc. will hold its annual convention November 5 and 6 at the Hotel New Yorker, New York. "Packaging in Wartime" will be the subject of the program discussions.

Members of the executive committee of the Institute are: Joel Y. Lund, president, who is vice-president of Lambert Pharmacal Co., St. Louis; A. Vernon Shannon, sales manager, Westfield River Paper Co., Russell, Mass.; and Charles L. Barr, vice-president, F. B. Redington Co., Chicago.

Financial

Gallaher Earns More

Gallaher Drug Co. reports for the year to June 30 a net income of $232,753, against $171,164 earned in the previous year. Sales for the year to June 1942 were $6,590,512, against $5,098,844.

McKesson Earns $1,360,995

McKesson & Robbins, Inc., reports for the six months ended June 30 a consolidated net profit of $1,360,995, after all charges and provision of $3,671,362 for estimated federal taxes and of $250,000 addition to the reserve for contingencies. This is equivalent to 72 cents a share.

No comparative profit and loss statement for the corresponding period of 1941 is available since the company was then being operated under trusteeship and the present capitalization was not in effect during that period.

Net sales for the first six months of 1942 were $102,878,996, an increase of 22 per cent. over the $84,531,336 for the comparable period last year.

Obituaries

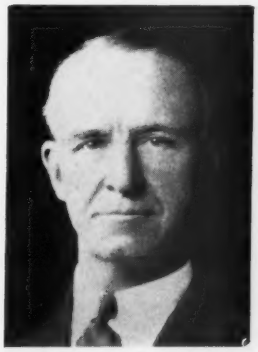
Carl Nelson Hand

Carl Nelson Hand, chemical engineer and retired plant manager of the Rubber Service department of Monsanto Chemical Co., died September 18 at Charleston, W. Va., while en route from Ohio to his home in Miami, Fla. He was fifty years old.

Mr. Hand, with E. J. Smail, Jr. and C. O. North, founded the Rubber Service Laboratories at Akron, in 1922 and was president and general manager until 1929 when Rubber Service became a part of Monsanto Chemical Co. He continued as manager of the Rubber Service department plant at Nitro, W. Va., until his retirement in 1938. Since then he had been engaged in private research work.

Isaac W. England

Isaac W. England, vice-president of the Continental Can Co., died September 18 of a heart ailment at Glen Springs, a health resort at Watkins Glen, N. Y., where he was spending his vacation. He was sixty-eight years old.



ISAAC W. ENGLAND

He was born in Ridgewood, N. J., and had made his home in Passaic, N. J. since 1900.

During the Spanish-American War Mr. England established the American Compressed Food Coporation, where food for the American Army was canned. In 1912, he founded the Passaic Metal Ware Co. and was its president until 1928, when it merged with Continental Can Co. Since that time, as vice-president, he had taken an active part in the company's affairs, more recently in connection with the company's activities in Washington, D. C.

John Stuart Littell

John Stuart Littell who resigned as president of C. S. Littell & Co., New York, in 1925, died September 17 at his home in Cranford, N. J. He was eighty-nine years old.

Mr. Littell entered the drug business as an errand boy for R. W. Robinson & Son in 1869. Upon the death of Mr. Robinson, he was made a partner in the firm which was incorporated in 1904 with F. M. Robinson as president and Mr. Littell as vice-president. The company bearing his own name was incorporated in 1921. In 1913 Mr. Littell served as vice-president of the National wholesale Druggists Association.

Fred D. Morgan

Fred D. Morgan of New Health Products Co., East Aurora, N. Y., died August 22, after several heart attacks.

Harry V. Wallace

Harry V. Wallace, vice-president and director of sales of the Kimble Glass Co., died at his home in Vineland, N. J., September 15. He was forty-eight years old, and had been ill for more than a year.

Mr. Wallace spent his boyhood in Wenatchee, Wash. He was working in power plants in that region and studying at the University of Oregon when he enlisted in the U. S. Marines in 1917.

After sales experience with Socony-Vacuum Co. and Owens-Illinois Glass Co., he joined the Kimble Glass Co. October 1, 1931, as Chicago branch manager. In January of 1939 he was transferred to the main office of the company in Vineland and in June 1939 became vice-president and director of sales.

EXCLUSIVE WITH HOPKINS

HOPKINS' FACTOLAC

For permanent emulsions of both fixed and volatile oils. Insures complete, homogeneous mixture without trituration or special apparatus. An ideal, trouble-saving, money-saving emulsifier.

HOPKINS' PINEALCO

To make a dependable Syrup of White Pine Compound, N. F., standardize on Hopkins' Pinealco. Therapeutically reliable, uniform in color, odor and flavor. So highly concentrated, a single pound of Pinealco will yield about 20 pints of Syrup.

BASIC INGREDIENTS

FOR TOILETRIES • COSMETICS • PROPRIETARIES

HOPKINS' NEUTRAL POWDERED WHITE SOAP

Assures snow-whiteness, neutral taste, absence of free alkali, low moisture content and very low residue of alcohol, water and sodium carbonate. Completely dependable uniformity and performance.

HOPKINS' FIJIOLINE

A pure, natural Vegetable compound —semi-liquid, mucilaginous, free of objectionable over-adhesiveness. An economical substitute for such bases as Quince Seed, Gum Tragacanth, Irish Moss and Flaxseed for lotions, wave-sets, etc.

"Quality is remembered long after price is forgotten"

FREE UPON REQUEST

Samples and quotations for any of these Hopkins' Specialties, upon request. We invite correspondence on any problems to which our technical staff can bring its expert cooperation.

J.L.HOPKINS & COMPANY 220 Broadway NEW YORK

THE HANDS that WORK for VICTORY can STILL BE BEAUTIFUL

DURLIN will play its part in upholding civilian morale by continuing the flow of nail enamel to the leading cosmetic packagers. Their products are helping to maintain the fine spirit of the American women during the present period of emotional stress.

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THE DURLIN CORPORATION

11 WEST 42nd ST. NEW YORK, N. Y.

N. W. D. A. Meeting

(Continued from page 395)

Committee has, I believe, clarified the question in everyone's mind to the point that it has now become a realistic and determined fact.

"Considering the facts as I have presented them to you, I think you will readily agree that the situation as it presented itself required, as it continues to require, that drastic action be taken in the conservation of existing motor vehicle equipment and other vital materials, including rubber, if we were to attain the objectives of the executive order creating the office, namely, the maximum utilization of existing transportation facilities. Let me warn you that your rubber stock pile is on the road today. Likewise, your truck stock pile is on the road today. You must conserve and preserve such stock piles, because you and we must "Keep 'em Rolling." To conserve such equipment and materials is to preserve the same and preservation will guarantee continuance of necessary and essential transportation services as long as possible. In order to promote better care and maintenance of motor vehicle equipment, the Office of Defense Transportation has organized a United States Truck Conservation Corps, and has asked every operator of a motor truck to join and actively participate in the program established. Every operator who signs the truck conservation pledge to practice preventive maintenance methods is doing that which is absolutely necessary, not only for his own protection, but for the protection of all transportation.

"We in the Office of Defense Transportation recognize, as we have always recognized the igenuity of the motor truck industry, private and for-hire. That industry which has so aggressively developed motor truck transportation in the past, surely can preserve it for the future if it will but accept the job and carry it through. This job is as much yours, if not more yours, than it is ours. We never have had any idea that we could, by the mere stroke of a pen, solve all of the transportation problems throughout the country. Rather, we do feel that we can cut the pattern and that you in turn must, as you will, produce the finished product. We can tell you, as we have told you, what is necessary to be done, but it is up to you to do it. It isn't a question of what we can do, but rather it is a question of what we must do. As someone has put it: "The difficult things take a little while to solve; the impossible things take a little longer."

"You may well ask, "How can I further reduce my mileage and still transport a constant or even increased volume of traffic?" Our answer to this question is that we have had carrier after carrier reporting case after case where 40 per cent. or more increased volume has been transported during a calendar month this year on 35 per cent. to 40 per cent. less miles than such carrier operated during the corresponding month of a year ago. These accomplishments have been due to reduction in frequency of service, elimination of parallel or duplicating routes, zoning of operations and compliance with our outstanding Orders. Much progress can be made through the formation of pooled or cooperative deliveries. Such action produces the maximum conservation if properly taken.

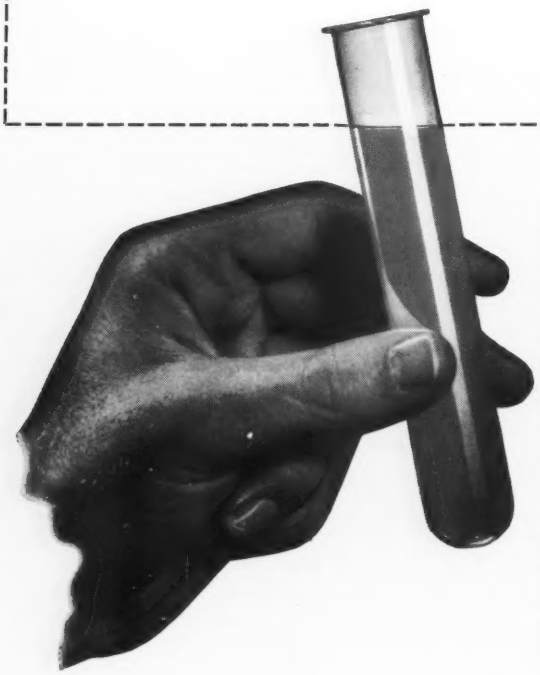
"The formation of pooled or cooperative deliveries necessarily involves joint and collective action by members of industry. In this connection, the Office of Defense Transportation and the Department of Justice on March 12, 1942, issued a joint statement dealing with such matters. Such statement provides that joint and collective action may be taken without violating the terms of the antitrust laws so long as such joint action so taken is for the sole purpose of conserving motor vehicle equipment and other vital materials, including rubber, and so long as such joint action falls within the four corners of such statement. We have also established a procedure for obtaining clearance to any such joint action. If parties desire to take joint action for the conservation of equipment and materials, and cannot determine as to whether or not such action comes within the joint statement, they may, if they so desire, submit such plan to us in writing, signed by all the parties thereto, whereupon our office will examine the same and if it meets with our approval, we in turn will submit it to the Department of Justice for clearance. If the Department of Justice clears such plan, the parties thereto will be immediately advised.

I wish to review with you the matter of the intent, purpose and effect of the outstanding orders issued by the director, which orders pertain to motor truck transportation services.

General order O.D.T. No. 6 was issued on April 20, 1942, and the terms and provisions of that order became effective on June 1, 1942. The order covered all local transportation services performed by all types of motor carriers within a local territory defined as the corporate limits of any given municipality and an area extending twenty-five air miles beyond such limits. The order required, as of June 1, 1942, the termination of all special delivery service. It likewise prohibited all call-back service, such as calls made for the purpose of effecting collection or for the purpose of making a second or third attempt to deliver a particular shipment. It required the termination of all motor truck transportation services in excess of one delivery on any one day to any one person, except certain deliveries which were exempt from such requirements. In addition to the foregoing, such order required all carriers subject thereto to reduce the total monthly vehicle mileage of rubber-tired vehicles in minimum amount equal to 25 per cent. of the total mileage of vehicles in operation during the same calendar month of the year 1942, exclusive of the mileage eliminated as a result of the termination of the so-called "luxury" services which I previously have mentioned.

"We recognized that with the issuance of this order, we were requiring many businesses to terminate services which they had previously rendered and which they could not terminate at a prior date due, for the most part, to competitive practices or customs."

QUALITY AND UNIFORMITY...



What do they mean to you?

IN *your* business, quality and uniformity are absolute essentials... in your finished products... and in your raw materials.

One excellent way to make sure you get both those essentials in *every* shipment of pharmaceutical materials that goes into your products—look to Monsanto as your source of supply!

Every batch of *every* Monsanto pharmaceutical is carefully checked against Monsanto's high standards at *every* important step in its manufacture. For a complete list of Monsanto pharmaceuticals, their properties and uses, and for experienced technical advice, inquire: MONSANTO CHEMICAL COMPANY, St. Louis, U. S. A. District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Montreal.

MONSANTO CHEMICALS
SERVING INDUSTRY...WHICH SERVES MANKIND

HELP! Prompt return of empty tank cars, carboys and returnable drums will help speed your *next* shipment of Monsanto chemicals... by helping to relieve critical shortages in shipping equipment.

F.T.C. ACTIVITIES

Orders

Lyon's Tooth Powder

The R. L. Watkins Company, New York, factory at Newark, N. J., manufacturer of "Dr. Lyon's Tooth Powder," has been ordered to cease misrepresentation.

The Commission finds that the respondent represents, among other things:

"DO AS YOUR DENTIST DOES—USE POWDER" or "DO AS YOUR DENTIST DOES WHEN HE CLEANS YOUR TEETH — USE POWDER;" and "It is the way your dentist almost invariably cleans your teeth when you go to him to have them made gleaming and beautiful. That is WITH POWDER. Thousands of people—everywhere—are adopting POWDER—their dentist's way of cleaning teeth;" and "No matter what you have heard about 'this' or 'that' dentifrice, the fact remains that your dentist knows more about cleaning and beautifying teeth than any one else. *And he almost invariably uses powder.* He'll probably tell you, if you ask him, that nothing cleans and polishes teeth more effectively than *powder.*"

The Commission finds that while the practice is by no means universal, probably the majority of dentists do use powder in cleaning their patients' teeth. The powder used, however, is almost invariably pumice or silex, both of which are highly abrasive and could not safely be used by the public as a dentifrice. The active ingredient of the respondent's powder is calcium carbonate, commonly known as chalk, is much less abrasive and less effective for cleaning the teeth. Only in isolated and exceptional instances do dentists use calcium carbonate, and even in those cases it is used somewhat as a supplement to pumice or silex, being used for the finishing or polishing of the teeth after the heavier work of cleaning has been completed. The respondent's product, therefore, the findings continue, is not comparable with the powder used by dentists, either as to composition or effectiveness.

The Commission also finds that the respondent has represented that its tooth powder is an effective antacid and will correct "acid mouth," this representation being made through use in its advertisements of the statement, "Even as a neutralizer in acid mouth conditions, Dr. Lyon's is an effective antacid." The Commission finds that the product is, in fact, wholly without therapeutic properties and that it is not an effective antacid and is incapable of correcting any acid condition which might be present in the mouth.

Representations by the respondent in its advertisements that the product is "Free from all * * * grit * * * it (the powder) cannot possibly injure or scratch the tooth enamel * * *" were found by the Commission to be exaggerated and misleading, as the powder occasionally contains particles of grit which have not been removed from the calcium carbonate in processing.

The respondent is ordered to cease and desist from disseminating advertisements containing the statement "Do As Your Dentist Does—Use Powder," or any other statement of similar import; or which advertisement otherwise represents, directly or by implication, that the respondent's product is similar to or comparable with the powder used by dentists. The respondent also is ordered to discontinue representing that the product is an effective antacid or that it will correct "acid mouth," or that it is free from all grit or that it cannot injure or scratch the tooth enamel.

Sulfuraid-21

Baer Laboratories, Inc., New York, engaged in the sale of "Sulfuraid-21," has been ordered to cease representing that its preparation or any similar preparation when used in hot water baths is an effective relief, preventive or cure for rheumatism, arthritis, neuritis, gout, lumbago, nervous exhaustion, or for muscular, articular, or ligamental pain, or pain due to rupture of muscles, contusions, tubes, tumors, abdominal spasms, pleural pains, or articular rheumatism of women during their climacteric period; that as a result of the use of "Sulfuraid-21" in hot water baths, sulfur is absorbed from the water through the skin and mucous membranes and exerts a general pharmacological effect on the body; that the addition of the preparation to hot water tends to make a person perspire more quickly or freely and aids in more rapid elimination of the body's waste products and helps to counteract acidity; or that "Sulfuraid-21" is the first successful effort to create sulfur in solution, or, when used in hot baths, possesses any therapeutic effect in the treatment of any disease or diseased condition of the body.

Willat Permanent Wave

An order directs Irvin A. Willat, trading as Heatless Permanent Wave Co., San Francisco, to cease false advertisements concerning a method of heatless permanent waving which includes use of a curling solution found to be unsafe when applied under some conditions and capable, in some instances, of resulting in serious and irreparable injury to health when used under the conditions prescribed in Willat's advertisements.

Complaint

Amogen Tablets

J. R. Hodges, trading as Amogen Co., San Antonio, Texas, engaged in the sale of "Amogen Tablets," is charged with false advertising.

The complaint charges that the respondent represented that the preparation is a cure or remedy and constitutes a competent and effective treatment for biliousness, malaria, common colds and fevers, poor digestion, and numerous other ailments and that it will rid the system of poisons and enable one to maintain good health and avoid sickness.

The complaint alleges that these statements are exaggerated, false and misleading and that the preparation is not a cure or remedy for any of the ailments enumerated, and is essentially a laxative and has no therapeutic value in the treatment of such ailments and conditions.

The complaint charges further that the respondent's advertisements are false in that they fail to reveal that the preparation contains calomel, a mercury derivative, and its continued use

War jobs helped by HOOKER

Fighting Tropical Diseases

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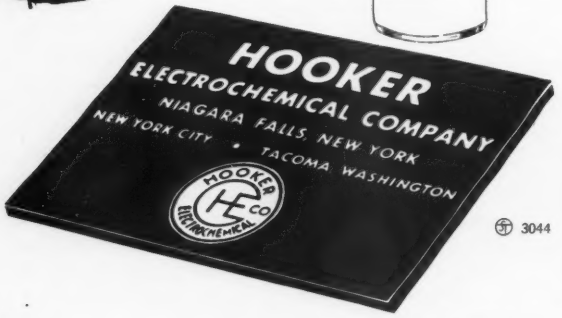
prepared with the highest grade of Thionyl Chloride, valuable chemical used in the manufacture of this important medicine. Similarly in a wide variety of other pharmaceuticals, HOOKER chemicals play important parts. Among the four-score products noted for purity and uniformity are Acetyl Chloride, Aluminum Chloride, Benzoate of Soda, Benzoic Acid, Benzoic Anhydride, Benzoyl Chloride, Benzyl Alcohol, Para Nitro Benzoyl Chloride, Sodium Sulfide, Sulfuryl Chloride.

HOOKER technical specialists are available for assistance in connection with chemical problems within their fields.



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over a long period of time may result in mercury poisoning and serious injury to the health of users. Moreover, the preparation is potentially dangerous when taken by one suffering from abdominal pains, nausea, vomiting or other symptoms of appendicitis, the complaint alleges.

Stipulations

Vaseline Hair Tonic

Chesebrough Manufacturing Co., Consolidated, New York, selling Vaseline Hair Tonic, and McCann-Erickson, Inc., New York, advertising agency which disseminated advertisements of the product, agree to discontinue representing that Vaseline Hair Tonic prevents or tends to prevent the recurrence of dandruff scales or that it affects the cause of dry scalp or goes to the root of dry scalp trouble.

Pixacol

Bernard Singerman, trading as Pixacol Co., Cleveland, Ohio, engaged in the sale of "Pixacol," agrees to cease representing that the product constitutes a cure for psoriasis and also that he will cease advertisements which fail to reveal that the preparation may irritate the skin, particularly if applied with rubbing; that one should avoid getting it into the eyes or on mucous membranes, and that it should in no case be applied to large areas of the body.

T-Lax

The T-Lax Products Co., Birmingham, Ala., selling "T-Lax," agrees to cease representing that T-Lax can be relied upon to attain or maintain good health; that it is effective in the treatment of stomach, liver or kidney troubles or of indigestion, biliousness, or similar ailments; that it aids digestion; that it will act as a laxative or have any effect upon the liver or act as a diuretic or aid to the kidneys; that it will remove the poisonous accumulation from the blood stream, or that it is different from all other products offered for the same purpose.

The respondent also stipulated that it will cease advertisements which represent that the preparation is in all cases safe or harmless or which fail to reveal that the product should not be used when abdominal pains, nausea, vomiting or other symptoms of appendicitis are present.

Corn and Foot Salves

Anton Sebeck and Oldrich Sebeck, operating as S. C. S. Chemical Co., Chicago, selling "S. C. S. Corn Salve" and "S. C. S. Athlete's Foot Salve," agree to cease representing that the corn salve is a remedy or cure for corns or will enable one to get rid of them or that it is a remedy or cure for callouses or warts; that the foot salve will cure athlete's foot or ringworm or that it is effective in the treatment of those conditions unless limited to such cases as are not "deep-seated;" or that the foot salve is effective in the treatment of eczema.

The respondents further stipulate that in the sale of the foot salve they will not disseminate advertisements failing to reveal that the preparation should not be applied to extensive areas of the body; that it should not be used continuously for an extended period of time, and that its use should be discontinued if a skin irritation appears; and that they will discontinue any advertisements of S. C. S. Corn Salve which fail to reveal that the preparation should not be applied to sores, ulcerations, open wounds or to any area of the body other than that under treatment.

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This oil has been the standard for many of America's very oldest cream manufacturers since their origin. It is water-white and crystal-pure . . . odorless and tasteless . . . of U. S. P. Acid Test and free of fluorescence . . . especially refined for the cosmetic industry and as pure as a mineral oil can be made. Because of its extra lightness you should specify it for the soft, light, fluffy creams demanded today.

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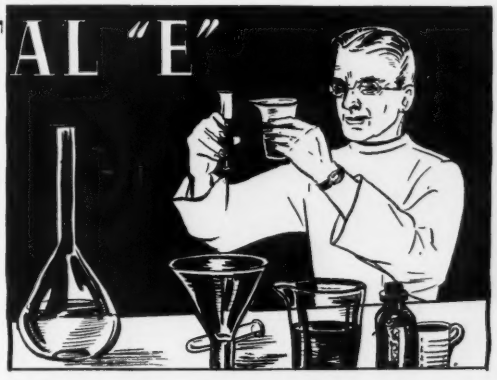

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INDUSTRY'S BOOKS

War Medicine, A Symposium, edited by Winfield Scott Pugh, M.D., Commander, (M.C.) U.S.N. retired, 565 pp., Illus., Philosophical Library, New York, Cloth, $7.50.

The publication of this work is a timely and valuable addition to the literature on the subject. Because the table of contents will best describe the scope of this book we list it here complete. (Surgery) Military Surgery, de Tarnowsky; Surgical Principles in Divisional Medical Units, Page; War Wounds, Moorhead; Treatment of War Burns, Wakeley; Wounding Mechanism of High-Velocity Missiles, Black, Burns, Zuckerman; War Wounds and Anerobes, Pritikin; Treatment of War Wounds of the Brain, Horrax; Brain Injury in War, Kennedy; Ocular and Orbital Wounds in War, Doherty; Ophtalmic Casualties Resulting from Air Raids, Campbell; Danger to the Hearing Apparatus in Modern Warfare, Wells; First Aid and Emergency Treatment of Gunshot Wounds of the Jaws, Ivy; Rupture of the Drumhead as a Wartime Injury, Alexander; Gunshot Wounds of the Heart, Turner; Anatomy, Physiology, and Pathology of Wounds of the Chest, Sellors; Closed Wounds of the Chest and the Physician's Place in a Chest Team, Nixon; Stab Wounds of Chest Wall and Lungs, Steward; Outline of Treatment For Severe War Wounds of the Chest, Neuhof; Closed Wounds of the Chest, Scadding; Gunshot Wounds of the Abdomen, Davis; Surgery of Abdominal Injuries, Heyd; Abdomino-Thoracic Injuries, Taylor; Blast and Concussion in the Present War, Fulton; Lung Injury Due to the Detonation of High Explosive, King-Curtis; Diagnosis and Treatment of Secondary Shock, Kekwick-Maycock-Marriott-Whitby; Anaesthesia in War Circumstances, Bourne; Blood Substitutes in the Military Service, Kendrick, Newhouser; Drainage of the Pleura, Brock; Plasma Protein—Its Physiology Relative to the Normal and Failing Peripheral Circulation, Marsh; War Wounds and Compound Fractures, Orr; Fractures Sustained in War, Darrach; March Fracture, Krause. (Aviation and Naval Medicine) Aviation Medicine in the Navy, McIntire; Principles of Aviation Medicine, Barach; Physiology and High Altitude Flying, Fulton; The Newer Cardiology and Aviation Medicine, Hyman; Hypotension in Aviation, Young; The Medical Aspects of Deep Sea Diving, Shilling; Cases of Injury to the Vertebrae Occurring in the Royal Airforce, Hall-Morley; High Altitude Flying and Deep Sea Diving, Behnke; Fatigue in Aircraft Pilots, McFarland; Sudden Compression Injuries of the Abdomen at Sea, Breden-d'abreu-King. (General Medicine) The Recognition and First Aid Treatment of "Gas Casualties"; The Nutrition of the Soldier, Epstein; Protective Foods; Liquefaction of Solid Foodstuffs for Diets, Neuwirth; Allergy in Military Medicine, Crandall; Painful Feet, Frankel-Funsten; The Prophylaxis and Treatment of Epidermophytosis of the Feet, Beckjord; Human Convalescent Serum and Vaccination in the Prevention and Treatment of Bacillary Dysentery, Felsen; Chigger and Jigger Bites, Weigel; Malingering, Hulett; Shamming Night-Blindness, Harman; The Psychopath in the Armed Forces, Dunn; The Cardiovascular Examination of the Army Recruit, Jackson; Selective Service Psychiatry, Bullard.

New Commercial Technical (English-Spanish) Dictionary, compiled by Antonio Pero Guerrero, Industrial Engineer, Escuela Central de Ingenieros, Madrid, Chief Editor, Editorial Tecnica Unida, 600 pp., Flex. binding, Thumb Indexed, Chemical Publishing Co., Inc., Brooklyn, Price $10.

This new dictionary contains more than 50,000 words used in electrical, mechanical, chemical and marine engineering, radio, mining, textile and other industries. Also the modern words referring to mechanized and motorized warfare, avaition, meterology, etc. Words used in business and commerce, conversion tables of weights and measures, English and metric systems. Part I—Spanish, English; Part II—English, Spanish; Part III—Conversion Tables of Weights, Measures and Monetary Units.

Theory of Cosmetology, by Anne Murray, R.N., Sixteenth Ed., 274 pp., Illus., Anne Murray Publishing Co., Hollywood, Cloth, $3.

This is the Sixteenth Edition of the textbook used successfully in the College of Beauty Culture operated by the author in California. Detailed instructions on every subject in beauty culture is contained in the volume. The question and answer system of instruction is used throughout the course. The paperbound "The Self-Examiner in Theory and Practical Cosmetology" is included in the price of the bound volume at $3 or may be purchased separately for $1. This contains two thousand state board true and false questions and answers.

Resins—Rubbers—Plastics, A Loose-leaf Abstract Service, edited by Professor H. Mark and Dr. E. S. Proskauer, First Year, 1942—Monthly (about 600 pages per year), Interscience Publishers, Inc., New York, $35 (binder $3).

The eighth monthly issue (August) of this loose leaf service has just been issued by the publishers. The abstract service covers the chemistry, physics and technology of resins, rubbers and plastics, searching all available domestic and foreign periodicals. The latest release contains a number of abstracts from German journals.

The Pharmacopoeia of the United States of America, Twelfth Revision, by authority of the United States Pharmacopoeial Convention, Prepared by the Committee of Revision and Published by the Board of Trustees, 880 pp., Mack Printing Co., Easton, $7.50.

The selection of U. S. P. medicinals is based on clinical and biological data, evaluated by medical experts. The Pharmacopoeia today is a reliable therapeutic guide. Standards are established and dependable tests and assays adopted for U. S. P. products. This is made possible through the co-operation in Pharmacopoeial Revision of nationally and internationally known authorities in medicine, pharmacy, and all related health sciences. This unprecedented, voluntary aid comes from our own Government and from the authorities in Canada and Great Britain, also from hundreds of experts associated with American colleges, universities, and industrial organizations. The U. S. P. contains a total of 659 medicinal products, of which 160 are new to this edition. New U. S. P. items include: Antimalarials, Anti-anemic drugs, Diagnostic Drugs, Heart drugs, Biological products and closely related substances, Surgical supplies, Diuretics and related products, "Sulfa" drugs and chemotherapeutic agents, Antiseptics, Barbiturates and related drugs, Antacids, Hormone products, Ergot-like products, Antisyphilitics, Narcotics, Analgesics and anesthetics, Vitamins, Parasiticides, Parasympathomimetic drugs, Miscellaneous medicinals, Miscellaneous tablets, Vehicles, Preservatives, CO_2 Absorbent, Colloidal agent, etc. An examination of the new book will bring to light many other new features but those listed here are of outstanding importance.

Strategic Materials In Hemisphere Defense, by M. S. Hessel, W. J. Murphy, and F. A. Hessel, 235 pp., Hastings House Publishers, New York, Cloth, $2.50.

This work makes clear to every reader the complex story of supply. In it are discussed the fourteen strategic and fifteen critical materials on the Army's list, their sources, potential sources, their uses and our needs. Pictographic diagrams have been used to translate the figures into visual comparisons. Special emphasis is placed on consumer goods, and the effects on the home and average citizen.

First Aid, Surgical and Medical, by Warren H. Cole, M.D., F.A.C.S., Professor and Head of the Department of Surgery, University of Illinois, and Charles B. Puestow, B.S., M.D., Associated Professor of Surgery, University of Illinois, 351 pp., Illus., D. Appleton-Century Co., New York, Cloth, $3.

Although the greater part of the text consists of consideration of emergencies which are related to conditions created by war, every effort has been made to include emergencies encountered in civilian life, many of which are medical, not surgical. Subjects such as wounds, burns, hemorrhage and shock are taken up in considerable detail; in general when dealing with emergencies of the military type the authors have stressed particularly treatment which is being adopted by the American Armed Forces in the present war. Because of the timeliness of this work, and the scope of the subject, this book should have particular interest to industrial surgeons, medical personnel in industrial plants of this industry, and for pharmacists and others with some biological training.

Industrial Chemistry, by Emil Raymond Riegel, Ph.D., Professor of Industrial Chemistry, University of Buffalo, Fourth Ed., 861 pp., Reinhold Publishing Corp., New York, Cloth, $5.50.

In this Fourth Edition, two chapters have been rewritten, those on Paper and Pulp, and on Synthetic Textile Fibers; the chapter on Portland Cement has been brought up to date, which involved a thorough reworking. The chapter on Rubber includes the new developments in synthetic rubbers, as well as the latest advances in working natural rubber. The several innovations in the technology of petroleum called for more space, so that clear and sufficient statements on "aviation gasoline," on alkylation, on the Houdry catalytic process, and on other topics could be made. A number of other changes, smaller in scope, have been made. There have been included: new methods for bleaching and refining sugars, the latest developments in the manufacture and application of dyes, in the hydrolysis of fats, in the distillation of fatty acids. Quiet emphasis has been placed on the manufacture of aluminum metal, and of magnesium metal. The chapter on fuels has been re-shaped; Under Radium, radiography is briefly described, for the first time, and a photograph reproduced illustrating the results obtainable with a very simple installation.

Natural And Synthetic High Polymers, by Kurt H. Meyer, Ph.D., Professor of Organic Chemistry, University of Geneva, Translated by L. E. R. Picken, Ph.D., Cambridge, Illus., 690 pp., Interscience Publishers, New York, Cloth, $11.

High polymers may be defined as chemical compounds in which a large number of identical or similar atoms or groups of atoms are united by (homopolar) primary valences. In this work an attempt is made to give a systematic account of the entire field of natural and synthetic, inorganic and organic high polymers. The book is divided into the following main divisions: Introduction; The Study of High Polymers; Inorganic High Polymers; High-Polymeric Hydrocarbons and Their Derivatives; Polymeric Ethers, Esters, Sulfides, etc.; Cellulose and Its Derivatives; Substances Related to or Associated with Cellulose; Starch and Related Carbohydrates; The Proteins; The Properties of High Polymers in Solution; Films, Foils and Membranes; The Molecular Structure of Animal and Plant Tissues; Appendix Table; Author Index; Subject Index.

The Biological Action of the Vitamins, A Symposium edited by E. A. Evans, Jr., Associate Professor of Biochemistry, University of Chicago, 227 pp., University of Chicago Press, Cloth, $3

In recognition of the common interest in vitamins on the part of investigators in many fields, the universities of Chicago and Wisconsin joined in a Symposium on the Respiratory Enzymes and the Biological Action of Vitamins in connection with the Fiftieth Anniversary celebration of the University of Chicago. The papers on the biological action of vitamins were presented at Chicago, September 15-19, 1941 and it

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is these papers that constitute the present volume. Contents: The Biological Action of the Vitamins, C. A. Elvehjem, Ph.D.; Cocarboxylase, S. Ochoa, Ph.D.; Vitamin B_1: Clinical Aspects, Norman Jolliffe, M.D.; Riboflavin, Paul Gyorgy, M.D.; Human Riboflavin Deficiency (Ariboflavinosis), W. H. Sebrell, M.D.; The Story of Pellagra and its Treatment with Nicotinic Acid, David T. Smith, M.D.; Pyridoxine, S. Lepkovsky, Ph.D.; Pantothenic Acid and the Microbiological Approach to the Study of Vitamins, Roger J. Williams, Ph.D., D.Sc.; Pantothenic Acid in Human Nutrition, Edgar S. Gordon, M.D.; Biotin, Vincent du Vigeneaud, Ph.D.; Choline, Wendell H. Griffith, Ph.D.; The Economy of Phosphorus in the Animal Organism, F. C. McLean, Ph.D., M.D.; Vitamin K, D. W. MacCorquodale, Ph.D.; Vitamin K.: Clinical Aspects, H. P. Smith, M.D., and E. D. Warner, M.D.

Detailing By Druggists, by Tom Jones, 51 pp., Romaine Pierson Publishers, Inc., New York, paper, 75c.

This is a supplement to the book Detailing The Physician, by the same author. Its purpose is to point out what can be done by pharmacists to increase the prescription volume of their stores. Contents: A Brief Look At The History Of Pharmacy In The United States; What The Doctor Expects; What The Druggists Expect; Improving Relations; A Program For Detailing; Ethical Advertising.

Laboratory Exercises in Bacteriology and Diagnostic Methods, by Noble P. Sherwood, University of Kansas, Frederick H. Billings, Formerly University of Redlands, and Benjamin J. Clawson, University of Minnesota, 228 pp., The World Co., Lawrence, Kansas, Cloth, $2.

The present volume represents the sixth edition of a laboratory manual which was used by the authors in their classes at a time when they were members of the Department of Bacteriology at the University of Kansas. The work is divided into the following main classifications: General Bacteriology; Bacteriology of Foods and Water; Diagnostic Bacteriology; Immunology; Culture Media and Staining Methods.

"*I Reminisce*," by Mae De Mon Sutton, 206 pp., The Tropical Press, Fort Lauderdale, Cloth, $2.

The author was for years a buyer and merchandiser of toilet goods in one of this country's leading stores. In her book she tells of her experiences in this retail field and of her trip abroad to purchase merchandise for the store.

Memorable Days in Medicine, A Calendar of Biology and Medicine, by Paul F. Clark and Alice Schiedt Clark, Department of Bacteriology of the University of Wisconsin Medical School, 294 pp., The University of Wisconsin Press, Madison, Cloth, $2.

Contains short biographies of famous personalities in medical history, arranged by date of birth as nearly as possible. A complete index makes this valuable as a historical reference work to the men in the profession who have contributed most to its advancement.

Those Enduring Young Charms, by Ruth Hooper Larison, 244 pp., Illus., Harper & Bros., New York, Cloth, $2.75.

Because this deals with beauty for the mature woman it is more than just another beauty book. Here is understanding advice on every phase of personal grooming for the woman "rounding forty"—from care of the figure, complexion, hair to the selection of a smartly becoming wardrobe. Many clever techniques for saving time and money are a helpful feature of the book, also pertinent suggestions for making social life and marriage a success rather than a routine.

Big Spring, The Casual Biography of a Prairie Town, by Shine Philips, 231 pp., Prentice-Hall, Inc., New York, Cloth, $2.50.

Looking at Big Spring, Texas, through the eyes of the local druggist—way back when "perfume came in bulk and a dime's worth would put any skunk on Main Street under the board walk" and when, believe it or not, "drug drummers came spanking into town behind a team of bays with their harness ajingle, like the lords of creation." Shine Philips aims to give you some good hearty chuckles, as he paints an unvarnished picture of small town life in a past era. His homely sense of humor makes his efforts successful.

Arithmetic of Pharmacy, by Charles H. Stocking, M.S., University of Michigan, and E. L. Cataline, Ph.D., University of Michigan, Seventh Ed., 163 pp., Cloth, $2.

The authors have presented the subject in a concise and understandable manner. For purposes of review, considerable material dealing with elementary arithmetic has been included. The sections concerned with pharmaceutical calculations are arranged in a logically developing order, the simpler types preceding the more complicated. Reference tables of atomic and molecular weights, and of the specific gravities and percentage strengths of a selected list of substances are included. Contents: Weights and Measures; Specific Gravity; Weight-Volume; Percentage Solutions; Concentration and Dilution; Alligation; Commercial Calculations; Problems Based on the Tables of the Pharmacopoeia; Thermometers—Temperature; Chemical Calculations; Tables.

An Outline of Organic Nitrogen Compounds, by Ed. F. Degering, Purdue University, Carl Bordenca, Alabama Polytechnic Institute, and B. H. Gwynn, Westvaco Chlorine Products Co., 381 pp., John S. Swift Co., Inc., Cincinnati, Cloth, $6.

This represents a development of ten years in the teaching of the chemistry of organic nitrogen compounds to graduate students. The material is presented in outline form, and is accordingly brief and to the point. The total coverage is, nevertheless, fairly comprehensive. This book is designed specifically for graduate students, research workers, and specialists in the field of organic nitrogen compounds.

Isomerization of Pure Hydrocarbons, by G. Egloff, G. Hulla, and V. I. Komarewsky, 499 pages, Reinhold Publishing Corp., New York, $9.00.

This work is a collection of the available literature on the title subject, done with the customary thoroughness of the authors. It is highly specialized and technical in treatment; there can be no popular, easy method of discussing the changes of structure of pure hydrocarbons. The subject is important enough, however, since the production of 100 octane gasoline depends upon isomerization, as does the manufacture of synthetic lubricants and synthetic rubber. Isomerization of hydrocarbons also finds applications in the pharmaceutical, essential oil, perfume and other industries outside of the petroleum field. This book, therefore, may well be an important addition to the library of the general research organic chemist.

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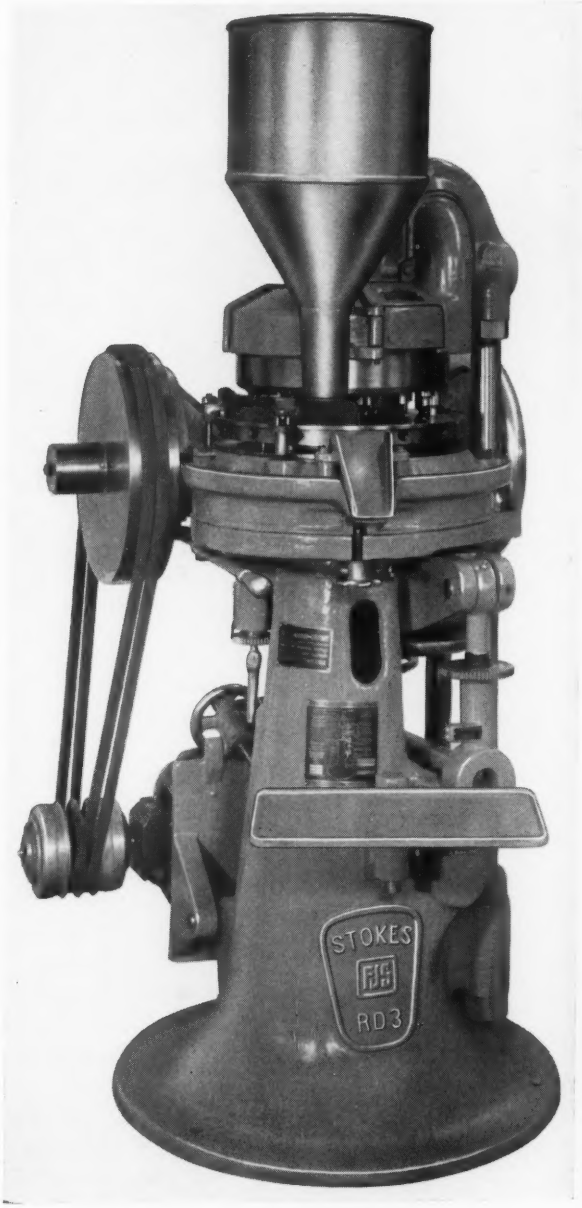

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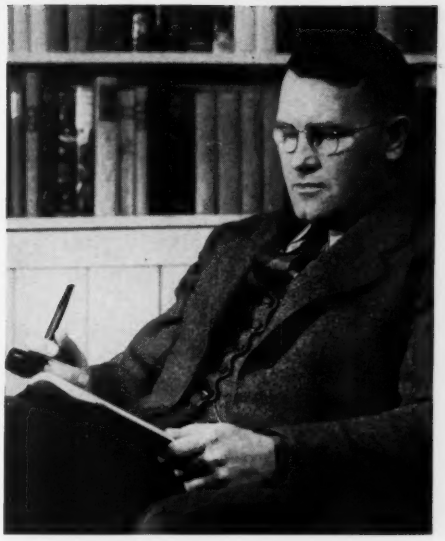
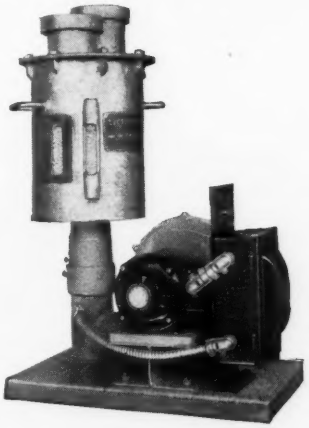


By FRANCIS CHILSON
Production Engineer

LECTROBREATHER

Lectrobreathers, developed by Pittsburgh Lectrodryer Corporation, 1032 32nd Street., Pittsburgh, Pa., are used to prevent the entrance of atmospheric moisture into oil and chemical tanks.

Lectrobreathers permit only dry air to enter the tank when it is emptied or when air enters due to temperature drops. Air leaving the tank, being thoroughly dry, has a partial reactivating effect which makes possible long periods between reactivations. They are mounted either directly on the tank or piped to it and are equipped with a color indicator for determining when reactivation is needed or when it is complete. Where Lectrobreathers are required for several tanks, the standard practice is to use one Lectrobreather on each tank and a central reactivator for all breathers. The reactivators are built for electric operation as standard for all units or for steam operation on the two larger units. Special Lectrobreathers are available for use on transformers or other equipment where atmospheric moisture is harmful.



Lectrobreathers use Activated Aluminas, which are dependable, time-tested adsorbents. They operate on the same principle as Lectrodryer equipment which is successfully used in many industries for drying compressed air, gases, and for maintaining lower than normal relative humidities in rooms. Complete information will be furnished on request.

SARAN PIPE

A new plastic pipe, manufactured in the same dimensions as extra strong steel pipe of 2″ OD or less, has just been announced by The Dow Chemical Company. American industry hails this plastic pipe as a contribution of considerable magnitude.

The resistance of this pipe to extreme moisture, chemicals and solvents, coupled with its strength and fatigue life, indicate it will play a vital role in industry. It is entirely unaffected by water—and only a few solvents exhibit any adverse effects. In many applications this new plastic pipe will undoubtedly replace strategic materials, such as vital metals and rubber, and release them for more urgent needs associated with the war effort.

This revolutionary type of pipe is made of a new thermo-plastic resin known as SARAN. The base resin is odorless, tasteless and nontoxic: The plastic does not burn and its toughness and abrasion resistance are of a high order. The retention of these properties on aging insures excellent wearing qualities. This pipe is nonscaling and withstands freezing. Heat resistance is said to be excellent up to 175° F.

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Our CA-2 wrapping machines are helping to cut down this loss of man-hours, by turning out thousands of convenient, individually wrapped tape bandages daily.

The machine wraps each bandage in glassine, and incorporates an easy-opening thread (or tape) in the wrapping. A tug of the thread tears off the end of the wrapper, permitting quick removal of the bandage.

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Easy opening devices are but one of the many wrapping advancements which we have developed to meet the special requirements of a wide variety of products. . . War work prevents us from introducing new developments of this sort at present. But there are ideas now on our drafting boards which will make equally important contributions to package merchandising when the war is won.

We shall be glad to work with you *now* on any future wrapping improvements you may have in mind.

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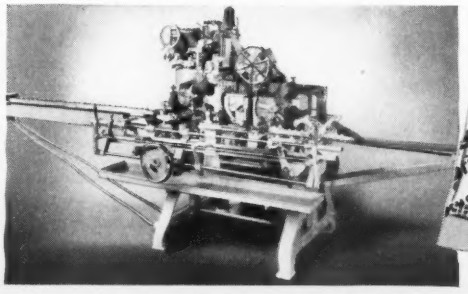
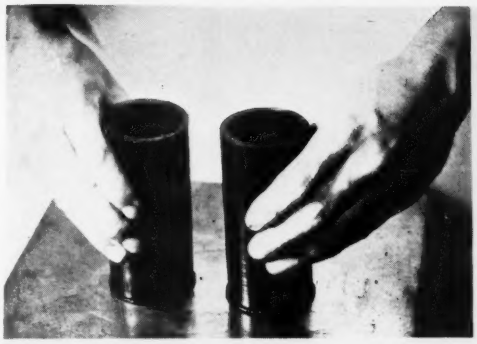
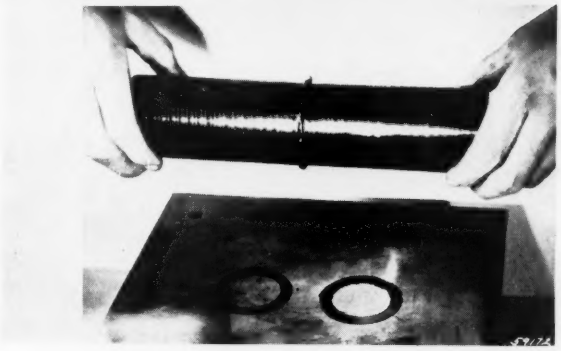


Our CA-2 type machines are being used by leading manufacturers for individual wrapping of tape bandage.

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines





SARAN pipe is produced in smooth, round, accurately sized lengths having dimensions identical with those of strong iron pipe. It can be readily welded, heated and bent. The pipe can be cut with a wood or hack saw and threaded with ordinary iron pipe dies.

In demonstrating the threading of the larger plastic pipe sizes, Dow engineers advise inserting a close fitting plug within the end to be threaded to guard against compression of the pipe and resultant shallow threads. This precaution is not absolutely essential providing sharp dies are used.

Weight of this pipe is naturally much less than comparable sizes of iron pipe. This, too, is a decided advantage in shipping, general handling and suspension. Tabular data concerning sizes, weights and bursting pressures is available.

Fittings for SARAN pipe, except standard flanges, are not available at the present time although they are expected to follow shortly. Molds are now being constructed to make additional flanges, with threaded ells, tees, and couplings to be available in the near future.

SECOND HAND EQUIPMENT

I've had a multitide of requests for second hand equipment. My invariable answer is to recommend circularizing the second hand dealers. If this fails circularize the drug and cosmetic manufacturers as most all of them have some discarded equipment. It must be said frankly that they are hanging on to what they would formerly have tossed into the junk heap. But still they might let you have what you want. In the meantime if you have any process or packaging equipment that is in good shape I'd be glad to know about it myself. Right now I'd like to get hold of a big Sweetland filter among other things too numerous to mention here.

It's a helluva world. Time was when I wouldn't look at a second hand machine. Now I'm delighted when I can get hold of a piece of junk that can be made to work by adding a bit of baled hay wire here and a carriage bolt there. One packaging machinery dealer actually is out trying to buy back all the machines of a certain type which he sold during the past three years. C'est la guerre

PREPARE FOR THE DELUGE

All of you who have been fiddling around with government business had better get set for the deluge. Up to date government requirements have been of a preparatory character. But this war hasn't started yet. Only a few of our men have been wounded. Drug consumption has not been great as yet. But wait until we quit shadow boxing and get in there punching. Then the casualty lists will roll up into the hundreds of thousands and the consumption of drug products will accelerate tremendously. Not long ago a friend visited a naval hospital containing some hundreds of the boys wounded at Pearl Harbor. Some of the poor lads had part of their faces shot away. Severe cases like these will have to be hospitalized for years before they can be rehabilitated. It takes no imagination to realize what that means in terms of drugs consumed. When you consider further that military demand is piled upon civilian demands and that war always produces epidemics of one sort or another; then add to this supplies for Russia, England, China and the South American republics, the potential total is staggering. It is to be deplored that increased business is coming to the industry in this fashion. I am deeply glad that our industry as a whole is not seizing the war as a means of profiteering. Most firms are handling war business on a narrow margin; some actually are handling it at a loss and in the main, everybody hopes to break even on costs and to hell with profits. But the fact is that *you* and *you* and *you*, production men have got to deliver the goods. You can bet your bottom dollar that every contract you get from now on will have a shorter delivery date and that it will call for greater volume. Not long ago a client of mine received a very large order on which he had specified a comfortable delivery date. He had no more than received the contract when he was informed bluntly by telephone that regardless of the contract he'd be obliged to deliver the whole order in *half* the time. Mark that PM (Production Man); that brushing aside of a contract term was virtually a military order. PS. It will be met. You're in the army now, Mister, and I'll miss my guess if in six months you're not sweating blood trying to meet production schedules you never dreamed of.

Design for Living

"IF we can take all that can be produced and divide it among the people who will then be alive to share it, *we shall be within reach of a very good standard of living for the first time in all history.*"

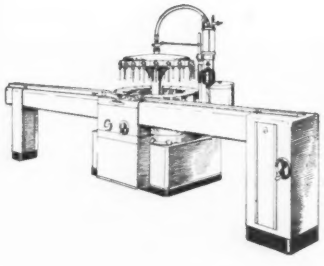
Milo Perkins

Executive Director of the Board of Economic Welfare

Note that while there's an "IF", it is an "if" which a united, victorious nation *will be able to overcome.* Hence we are straining every nerve — employing all our resources in executing the war orders that have been given us, to help speed the day when "we shall be within reach of a very good standard of living" in a land of happiness. This is the American Design for Living!

Completely automatic, semi-automatic, hand-fed equipment to clean, fill, close and convey bottles, jars, tins and collapsible tubes.

FILTERS . . . PUMPS . . . PERCOLATORS



THE KARL KIEFER MACHINE CO.

CINCINNATI, OHIO

NEW YORK . . BOSTON . . CHICAGO . . SAN FRANCISCO . . SEATTLE . . LOS ANGELES . . LONDON, ENGLAND

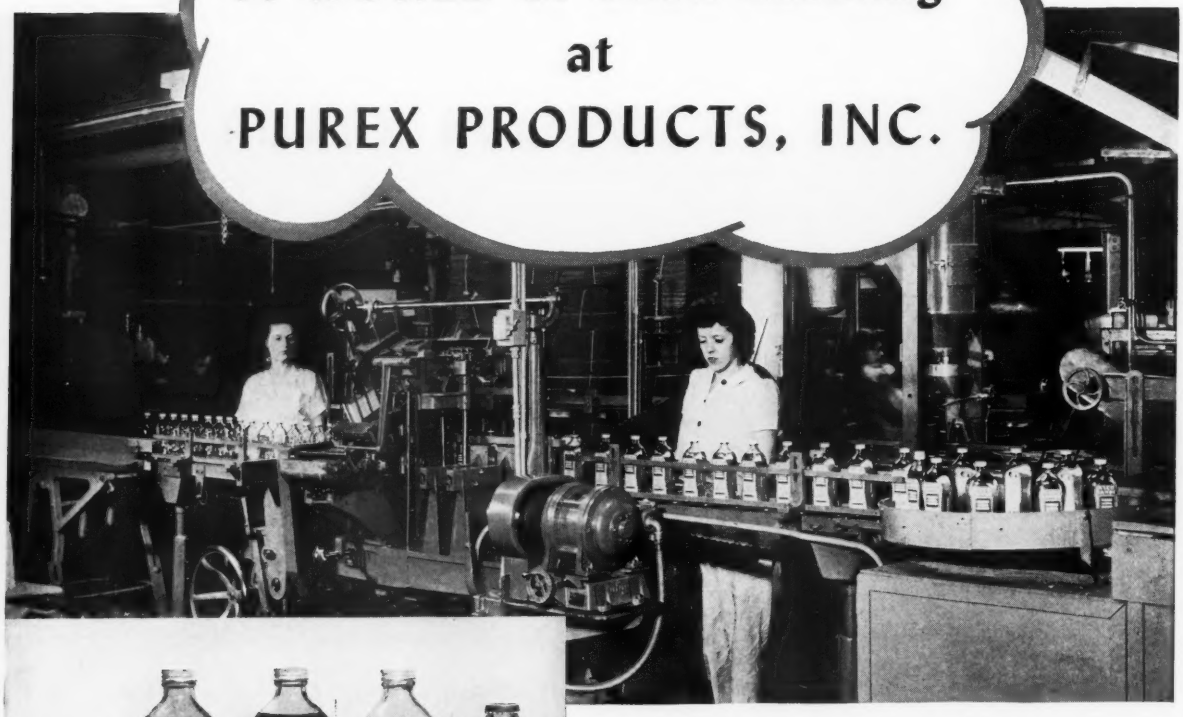
SPRAY DRYING

So much talk has gone around about spray drying this and dehydrating that, that it seems appropriate to discuss this subject in some detail. Judging from my correspondence some of the boys have a misconception concerning the nature of spray drying and its application; others who do know something about the process seem to have gone whacky on the subject. One chap, who had a particularly difficult time handling a sticky, viscous tablet granulation proposed to make a solution of the whole damn mess so that it could be spray dried. I asked him how much of the stuff he had to dry and he said about a thousand pounds per month. Well, comparatively speaking, when you are referring to spray dryers, a thousand pounds per month is just about powder enough to dust a gnat's fanny. Apparently the lad was misled concerning the size and complex construction of spray dryers. Spray drying definitely belongs in the mass production class. Definitely it can and has been applied experimentally to cascara, aqueous extracts of senna, licorice, senega, quassia and numerous chemicals of one kind or another. Far be it from me to say that some enterprising outfit will not in the near future introduce a small spray drying outfit. At present they are hefty affairs consisting of a gas furnace, one or more feed pumps, concentrator, drying tank or chamber, cyclones and collection tanks. The drying chamber usually contains a high speed centrifugal atomizer which serves to convert the partly concentrated feed liquid into a curtain of mist. This mist is commingled with a continuous stream of gas or heated air which causes almost instaneous evaporation. The moisture vapor is carried off through a stalk or barometric condenser and the exhaust gas carrying the dried material in the form of dust is swirled through a cyclone in which the dust or dried product is separated from the air or gas. Provision must be made for filtering the gas leaving the cyclone to insure full recovery and a means must be included in the set-up for cooling or removing the dried product continuously before it gets a chance to heat up by convection. This quick removal of dried product is important. I've seen material coming out of spray driers which actually was cold to the touch. How can this happen? Flash drying up to 500° F has been applied to materials susceptible to heat without impairing their quality because material will not begin to heat up excessively until the point of latent heat of vaporization has been passed and if, at that time, the material can instantly be removed from the drying chamber there will be no perceptible rise in temperature. Sounds screwy doesn't it? I used to think so too. But when you consider the fact that vitamins, enzymes and blood plasma have been spray dried without noticeable impairment of potency or character, then wonderment must cease in the face of the facts. Milk is spray-dried without the least degree of charing and without perceptible loss of flavor. The product when reconstituted with water tastes actually like fresh milk and not the godawful stuff that was common a few years back when milk was dried in vacuum pans and on atmospheric drum driers.

What's the basis of spray drying? Surface exposure Nothing else. You cannot possibly produce a film on a drum dryer as fine as the fog which a spray dryer creates. This suggests an idea which may be entirely crack-pot since I have not yet had a chance to try it on a commercial scale. Some years back we adapted for the Chattanooga Medicine Co. a rapid recirculating vacuum evaporator which was based on a standard milk evaporator. Experience with this apparatus in the intervening years has shown that senna extract can be concentrated sufficiently as fast as it can be drawn from the extractor. At the beginning we used heat on the pan as well as in the calandria. Then we cut the steam out of the pan jacket, reduced the input and also reduced the steam pressure. We did this because in the former operation the product foamed so badly that unless it was constantly watched it would spew ("puke" they call it down South) into the condenser. Now, the extract sprays from the calandria in a fine rain from which the right amount of vapor is flashed off and the liquid collects in the body of the evaporator which merely serves as a collection tank. Again, this is a question of balancing heat, surface and volume. In the case of senna extract the product is not dried.

This long winded preamble leads to this: suppose we wanted to adapt this apparatus for actual drying, what would happen if we stepped up the vacuum to plus twenty-eight inches and the steam to fifty pounds; and suppose, moreover, the calandria was used merely as a preheating chamber and the heated liquid actually atomized into the body of the evaporator? Under these conditions don't you think it would be possible to produce a powdered extract directly. Of course I can forsee some mechanical difficulties. I don't quite see how a stuffing box, that would hold against a high vacuum, could be made which would still be free enough to permit the operation of a high speed centrifugal atomizer. It might be possible of course to use orifice type atomizers and to pump the extract. Suppose for a moment these do not turn out to be such problems as they seem. Then it appears that you could develop a spray drying outfit which could be used on alcoholic extracts which is not the case with existing spray dryers. There'd be some other problems of course, you'd probably have to refrigerate your condensers when operating under such high vacuum and in normal operations this would take a considerable tonnage of refrigeration. But I doubt if this would be as expensive as to attempt to use absorption towers (as one chap proposed to do), with a commercial spray drying outfit. Spray drying in my judgment is limited practically to aqueous extracts and large scale operation. If on any of these devious turns of reasoning I've fallen off the sled I wish you'd be good enough to enlighten me.

A WORLD of Good Labeling at PUREX PRODUCTS, INC.



A representative collection of bottles that are labeled at the Purex Products plant by the WORLD Automatic BEE-LINE Labeler. Note the variety of bottle sizes and shapes.

It's a WORLD Automatic BEE-LINE Straight-away Labeler. They're busy as bees at the Purex Plant so they rely on the *WORLD BEE-LINE* to meet their stiffest production schedules. And from all reports it's doing a "honey" of a job.

Containers of widely varying size and shape are smoothly and precisely labeled every day as they move straight through the BEE-LINE without stops, detours, jarring or jamming.

Purex can depend on efficient, economical production labeling from the BEE-LINE for many years to come. It is built to the same high standards of quality and precision that have earned for this complete line of Automatic and Semi-Automatic Labelers the widely held opinion that ***"you get the best labelers in the WORLD".***

WORLD LABELERS

ECONOMIC MACHINERY COMPANY

Builders of World Automatic and Semi-Automatic Labelers for Every Purpose

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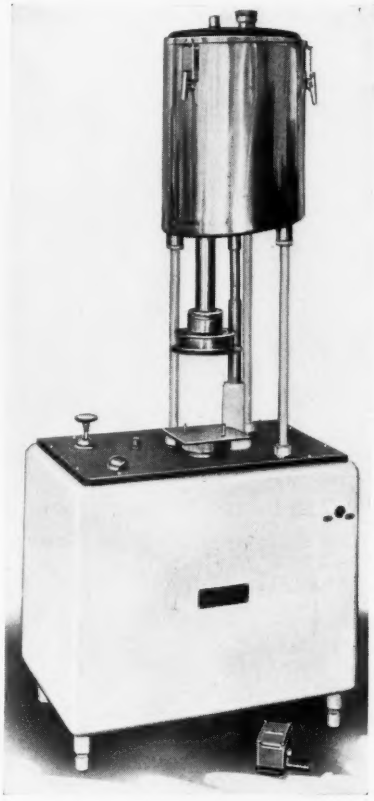
SALT LAKE CITY EL PASO SEATTLE PORTLAND LONDON MONTREAL TORONTO WINNIPEG
SPOKANE VANCOUVER SYDNEY, AUSTRALIA WELLINGTON, N. Z. SAN JUAN, P. R.

NEW FOAMLESS FILLER

Pictured here is the new Foamless Filler just announced by Mojonnier Bros. Co., 4601 W. Ohio St., Chicago. This new filler was developed to answer the growing need for a filling unit which would fill liquids or semi-liquids into containers without mixture of the product with air. While the container is being filled, the nozzle, or filling valve, remains under the surface of the product in the container and this feature prevents



the mixture of air with the product. We are told that the Mojonnier Foamless Fillers are available in many different styles. In addition, a number of different sizes of containers may be filled on the same machine.

PRODDING THE IMAGINATION

The last issue of the *Readers Digest*, September or October, I'm not sure which, contains an article on prodding the imagination which all of you should read and re-read. It outlines a practice I have followed for years and have tried to persuade other people to follow. The author, an editorial writer, describes how one day he decided to write a short story based upon a certain incident. He got off to first base and there got stuck.

He thought about the plot continually for days and fretted about it nights and got exactly nowhere. He never did get anywhere with that particular story. Then one day he was passing a prison and like a flash of lightning a complete plot for a better story popped into his mind. The next day he had a similar revelation of another complete story plot. Upon reflection he realized what had happened. His will inexorably had forced his imagination to work and subconsciously it did work.

You can do the same thing with plant operations. An old trick of mine is to concentrate upon a problem and *write down* (that's important), all the ways in which such a problem might be licked. I write down all the ideas including those which are screw-ball, wild and fantastic. After a while you'll feel dead and drained dry and the answer hasn't come. Then a day or two may pass and suddenly the answer arrives and you wonder why in the hell you hadn't thought of it before. The answer is that before you really hadn't tried.

COLTON HIGH SPEED ROTARY

I received the following letter from my old and very dear friend Doan Hage of the Arthur Colton Co. I am quoting the letter verbatim because I have seen this press in operation and it's pretty swell. Doan has reason to be proud of this job.

"Dear Frank:

I feel that I should let you know of one of Colton's recent developments in a really fast rotary Tablet Machine. This machine operates at the speed of 1650 tablets per minute, with a maximum diameter of 3/16" round. Also it is fitted with an especially designed vacuum cleaner and dust collector, which makes it possible to deliver thoroughly clean tablets requiring no further blowing with a bellows or sifting to get the dust out of them. Some of these models are also fitted, in conjunction with this cleaner, with an automatic counting and bottling device, which places the tablets directly into bottles or other containers in multiples of 50 and up to 1000s or even more.

With kind regards,

Doane Hage"

NEW FACE POWDER MATERIAL

On my desk is a sample of an extraordinary face powder material. It is homogeneous. It has slip covering power adhesiveness. It is made entirely of oyster shells, so I am told. I have not had the product analyzed, nor have I any idea how much of it is available, neither have I any idea what it costs per ton. I have been given to understand that it has been produced by a new process which utilizes the linings of the shells only. If this material actually is as good as it looks and if it withstands the tests ordinarily given to face powder it should be a find, because the advertising men will be able to say that the pearl is no longer in the oyster but on milady's cheeks "of small magnolia leaves. Oh whitest so soft parchment etc. etc." I should have been an advertising man instead of a production punk. Don't for god's sake write me about this until I get more dope on it; then I'll give you the sponsor's name and whatever else I can learn about it.

EPPENBACH ORIGINAL

Triple Action

LIFTS YOUR PRODUCTS TO *Higher* DISTINCTION

THIS POWERFUL TURBINE HAS A WHOLLY DIFFERENT DESIGN TO MAKE TRIPLE ACTION MORE EFFECTIVE

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● You win quicker consumer recognition when finer qualities are accentuated in your products with the EPPENBACH COLLOID MILL. Its original *triple-action* turbine breaks liquids more violently—its mechanical and hydraulic shearing is micrometrically adjusted even to a point where clearances appear closed. *No air is pulled in!* Temperature is regulated by water jackets. Only moving part is the conical rotor which compensates for wear. Self-cleaning, simple, sturdy. *It assures exact control!*

● APPLICATIONS. *Drugs:* stable emulsions, as mineral oil or agar; to grind and disperse magnesium hydroxide for milk of magnesia; grind glands, chick embryos and tissue for serums and vaccines; grind and smooth salves and ointments; produce colloidal bismuth.

● *Cosmetics:* to grind lipstick; emulsify oils and base for creams; homogenize hand lotions; grind and smooth creams and ointments; impart high gloss to creams.

Send for latest literature.

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Processing Equipment for Over 29 Years

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MANUFACTURERS OF
PUMPS
CAPPERS
FILTERS
CONVEYORS
WASHERS & DRYERS
WASHERS
CORKERS
FILLERS

GOVERNMENT PACKAGING

I have just learned that W. P. B. has set up another of its multitudinous branches called the Packing and Packaging Branch of the W. P. B. The branch is under the direction of Charlie Southwick, of General Foods, and if Charlie gets any sort of cooperation at all government packaging should begin to be, in a short time, approximately rational.

NEW SPRAY DRYER

The requirements of a good dehydrating process are as follows:

1. The natural flavors or characteristics of original products must be retained.

2. The dehydrated product must be uniform.

3. The product must be capable of reconstitution to its original form.

4. The maximum amount of the process heat must be utilized.

5. The original cost of the equipment and of its operation must be low.

After a long period of development and testing, the problems encountered in meeting the above requirements have been solved so it is claimed in the Drying and Concentrating Company's Dehydrator.

Maximum mixing between product and heated air is accomplished by a unique centrifugal-type spray head.

The product being dehydrated is pumped into the Concentrator by a sanitary pump. The discharge from the Concentrator is pumped to the top of the Drying chamber by a second sanitary pump, and is discharged into the chamber through a centrifugal spray head into the heated air which is whirling at high velocity.

There results a quick, thorough and uniform mixture, causing the moisture to be evaporated from all particles of the product uniformly and almost instantaneously.

No special collection chamber is necessary with this dehydrator. Because of the high velocity of the spiraling action within the Dehydrating Chamber, the powder formed by dehydration is hurled against the sides of the chamber by centrifugal force, and drops down to the lower part of the Dehydrating Chamber, which thus acts as a collector.

Among the products dried in this Dehydrator are: Milk, Egg Yolk, Blood, Egg White, Gelatin, Kidney Extract, Soy Bean Protein, Irish Moss, Blood Plasm.

The Dehydrator described herein is a product of the Drying and Concentrating Co., 332 South Michigan Avenue, Chicago.

TAURUS GOES TO TOWN

I knew I should not have named my bull after Victor P. Victor of the J. O. Ross Engineering Co. I might have known that having Victor as sponsor that Taurus, sooner or later, would seek greener pastures. He did. After behaving like any respectable gentleman Taurus looked over the fence and spied a herd of eighteen virgin Holstein heifers. Taurus was not interested in thoroughbreds but in thorough breeding. So he pushed the fence down and got in among these innocent heifers. I learned from the irate farmer who owns them that Taurus wouldn't take no for an answer. The farmer threatened to sue me for damages because his heifers ain't what they used to be. The farmer cast him out into exterior darkness, whereupon he ambled down the road in a satisfied and amiable frame of mind. His next stop was the immediate premises of a little lady who runs a farm all by her lonesome. (Her husband comes home weekends.) When I learned of Taurus' invasion of this feminine estate I immediately went over to apologize for my bovine representative. The lady was wroth indeed. She shook her finger under my nose and exclaimed excitedly, "He ate my panties!" I said, "Oh mygawd, you weren't wearing them, were you?" She said, "No, they were hanging on the line." I told her I had always taught Taurus to be eclectic in his tastes and it was to be expected that given a chance to discriminate he would always select a delicacy. She didn't seem to understand this so I had to pay for her panties. The next I heard of my wandering bull he turned up in a corn patch where he consumed about fourteen acres of field corn. This went on for about two or three weeks and when I rounded him up I found him lying in a patch of woods looking thoroughly exhausted but utterly triumphant. He'd covered the county. He looked at me with a sort of sheepish expression and promptly turned around, headed for home where in he now is lying safely secluded (I hope) enjoying the memories of three weeks of delicious debauchery.

CEMESTO

I may have told you about Cemesto the new insulating wall board made by the Celotex Corporation but it bears repetition as it is a swell product. This new wall material consists simply of two one eighth inch sheets of cement asbestos boards bonded to a core of celotex. It is a good insulant, moisture-proof, light, rigid and strong. It is available in sizes up to 4 x 12 feet. It forms a single course interior or exterior wall which may be attached directly to studding or steel framing members.

MONSANTO SCRAP

More than 3,700,000 pounds of scrap materials have been collected and sold for war use in the American plants of Monsanto Chemical Company in a campaign which started last Spring. Scrap iron to the extent of 3,200,000 pounds was turned back into productive channels, or enough to make steel for 114 26-ton medium tanks or almost one million Garand rifles. The drive is part of a company-wide effort either to reclaim or junk all obsolete equipment. The surplus equipment department is organized to salvage all unusable manufacturing equipment and serves as a clearing house for the inter-plant sale of this equipment.

Automatic filling and sealing

Paper packets

provide refills for containers of expensive or scarce materials

Automatic filling and sealing of paper packets is fast and economical. Packets offer many merchandising advantages. Send quantity of your material for test purposes . . . for return to you in packets . . . for report. No obligation. Write, wire or phone for full details.

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3—World, 1-Ermold semi-automatic Labeling Machines.
1—Pneumatic Scale Powder Filler and Capper, Unit complete.
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4—300 gal. Pfaudler jacketed Kettles, side, m.d. agitators.
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The COMPOUNDER'S CORNER

ABSORPTION BASE

Amerchol Cholesterol Absorption Base is a concentrated water in oil emulsifier. It forms pure white, stable emulsions for use in creams, ointments, lotions and other cosmetic and pharmaceutical products. It is odorless, tasteless and practically colorless. Its function as a surface-active agent is due to its high content of free cholesterol, sterols and higher alcohols such as cetyl alcohol. Amerchol Cholesterol Absorption Base is unique among bases of the cholesterol type in that it contains no fatty acids or fatty acid esters.

This new absorption base is the result of extensive research in physical and physiological chemistry. It was found that only by omitting all fatty acids and their esters, and by utilizing the colloidal properties of cholesterol and certain of the sterols and higher alcohols (cetyl alcohol) could the optimum results be obtained. These highly emollient, skin softening factors are of definite value in cosmetic and dermatological preparations and have special applications in pharmaceuticals.

The complete absence of fatty acids and their esters and the chemical inertness of all the components of Amerchol Cholesterol Absorption Base, results in a product which is unaffected by most acids, alkalies, electrolytes, oxidizing agents and drugs. The possibility of developing rancidity, color or odor is nil.

This stability is not only a property of the Amerchol Cholesterol Absorption Base in its simple anhydrous form but is also true of the emulsions it forms with large quantities of water. These pure white water-in-oil emulsions form very readily and are unaffected by temperatures ranging from 12°C. to 50°C. This unusual stability is due in part to the fine particle size of the dispersed water droplets in these emulsions. This fine particle size is obtained without recourse to special equipment-ordinary agitation being sufficient to produce stable emulsions. The resulting emulsions permits the inclusion of more water than heretofore in emulsions of this type and explains the ability of these emulsions made with Amerchol Cholesterol Absorption Base to resist freezing at sub-freezing temperatures and to resist separation at elevated temperatures.

The known activating and emulsifying properties of cholestrol and sterols are combined in Amerchol Cholesterol Absorption Base to produce a product which facilitates the penetration and absorption of incorporated therapeutic agents.

Using a modification of the Food and Drug Administration's Agar Plate Technique, and judging by the width of inhibition zones, results indicate that the Amerchol emulsions give the fastest and most effective liberation and transfer of incorporated drugs.

Amerchol Cholesterol Absorption Base is now available in quantities. The raw materials are domestic in origin and are under no restrictions at present.

GERMICIDAL PLASTICS

Perfection of self-sterilizing plastics that can be used for the production of food containers, drinking cups, and similar utensils or as a durable antiseptic paint or varnish to coat other exposed surfaces is now reported from the Rare Metal Institute, California Institute of Technology.

Extremely small quantities of ionized copper, silver or gold have remarkable germicidal powers. Silver was selected by the California metallurgists as most promising because of its relatively low toxicity and comparative cheapness. The feasibility of coating surfaces with metallic silver was first ruled out, since such surfaces are soon "disactivated" by the formation of surface films of protein or other germicidally inert compounds. In order to produce a surface not susceptible to this "disactivation," only a portion of the available silver ions should be present on the surface, with an abundant supply of reserve ions protected from deterioration but so located as to permit rapid surface replacement by outward diffusion. To accomplish this the reserve silver compounds should be incorporated in some plastic material having the desired rigidity and outward diffusion rate.

The only inexpensive durable substances with the required properties are certain organic resins or plastics currently used in the production of the newer varnishes or paints. Silver compounds can be incorporated in the unpolymerized resins or dissolved or dispersed in the solvent. The further incorporation of a neutral, opaque filling material is of advantage if the germicidal surface is to be exposed to light. The resulting mixture is a viscous fluid which can be applied by brush or by spray. The fluid hardens in situ by polymerization or evaporation, forming a surface that is tasteless, odorless and resistant to mechanical wear. The total quantity of silver which the material must contain varies with the intended use and desired degree of permanence. One Gm. of silver ions for 1,000 square centimeters of exposed surface is the heaviest type of varnish thus far developed.

The germicidal properties of such surfaces have been tested with a number of

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For high grade cosmetics, deodorants and allied products. **Ultra White. Extremely Fine. Purity Guaranteed** to contain less than 20 P.P.M. lead and less than 2 P.P.M. arsenic.

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yeasts, molds and saprophytic bacteria. The test micro-organisms are suspended in distilled water, peptone water, sucrose solution, cider, milk or other desired medium, which is spread as a thin film over the test surface. At intervals samples of the film are removed by means of a sterile cotton swab, and the number of viable micro-organisms is determined by routine cultural methods. The germicidal efficiency of the surface is judged by the rate of decrease in the viable count. With the most efficient surface thus far prepared, 100 million of Escherichia coli per cubic centimeter of suspension fluid are killed in less than one minute. Other surfaces require five or more minutes for total sterilization.

The rate of sterilization does not vary appreciably for the vegetative forms of different bacterial species. Spores, however, are less readily killed, B. subtilis spores, for example, suspended in cider or sugar peptonic solution requiring fifteen to thirty minutes for a 95 per cent reduction in viable count. Surfaces are not appreciably impaired by repeated washing, until the plastic layer is completely removed by mechanical wear.

Thus far acid fast bacteria and pathogenic viruses have not been tested with the new germicidal plastics. The plastic is readily applicable to metal, glass and wood surfaces or absorbed in paper or cloth. It is resistant to acids, alkalis and boiling water but may be readily removed by certain organic solvents. Its predicted effects in controlling microbic infections, however, have not yet been confirmed experimentally or statistically. *J. A. M. A. vol. 120, p. 127.*

HAND LOTIONS

A comparison of water base and gum base stearic acid hand lotions has been made. The gum base lotion is superior to the water base lotion because excessive dampness is prevented by absorption of moisture by the gum.

Cetyl alcohol improves the texture and smoothness of the finished product and through its ability to become hydrated assists in stabilizing the lotion (retards separation into layers). Concentrations of less than 0.5 per cent. were ineffective; greater concentrations produced a greasy feel or texture and increased viscosity to an undesirable degree. Sheen was also hindered.

Sheen is due to the crystallization of the unsaponified stearic acid in the form of needleshaped crystals from which the light is reflected at all angles. Sheen increases with age until a maximum is obtained.

Best results as to body and stability depending upon the ratio of stearic acid to t.e.a. to cetyl alcohol were: Stearic acid 5 per cent, t.e.a. 0.5 per cent., cetyl alcohol 0.5 per cent—a 10-1-1 ratio. Best results as to body and stability depending upon the ratio of stearic acid to KOH to cetyl alcohol were: Stearic acid 4 per cent, KOH 0.2 per cent., cetyl alcohol 0.5 per cent—a 20-1-8 ratio. For all practical purposes both formulas produce lotions with identical properties.

Use of glycerin was considered superfluous, the gum and the hydrated cetyl alcohol taking its place.

A concentration of 0.3 per cent. sodium alginate gum supplies sufficient slip to the lotion. A preservative, sodium benzoate, 0.15 per cent., should be used.

The lotion tends to thin on aging and should be stirred at frequent intervals during this process. If allowed to stand without agitation crystalline cakes of the recrystallizing stearic acid tend to form increasing the possibility of separation. The product should not be dispensed for at least a week.

Stirring apparatus should be efficient in order to effectively hydrate the cetyl alcohol, effectiveness of hydration depending on a state of very fine division of the cetyl alcohol.

Alcohol, 5 to 10 per cent., may be added to decrease drying time of the lotion.

The t.e.a. lotion had a *p*H of 7.80 and the KOH lotion a *p*H of 7.31. Both lotions are non-irritating upon continued use. *A. H. Musick, J. Am. Pharm. Asso.*

STORING COD LIVER OIL EMULSIONS

When stored for fourteen months, cod-liver oil emulsions decomposed only in incompletely filled containers; the quality of the glass of the containers had no effect. Changes in the acidity and in the iodine number of the oil accompanied this decomposition. The changes in these values were less marked when the emulsions were stored in contact with carbon dioxide or nitrogen. The effect of a number of factors on the determination of the vitamin A by the Carr-Price method is described. This method was used to follow changes in the vitamin A content. Improperly stored oil lost vitamin A when kept for one year. Emulsions, stored in completely filled containers or in contact with an inert gas, showed a loss of up to 8 per cent. in fourteen months; in the presence of air, the whole of the vitamin A was decomposed in the same period. Homogenization caused no loss of vitamin, and the use of an inert atmosphere during the preparation of emulsions was concluded to be superfluous. *W. Paul and W. Sperber. Apothekerztg, Berl. vol. 56, p. 1, 9, 34.*

ASCORBIC ACID AND GINGIVITIS

Fourteen cases of gingivitis have been treated with massive doses of ascorbic acid without any other dental treatment such as scaling or mouthwashes. Ascorbic acid (300 mg.) was given daily until a urine test showed that the patient was saturated with the vitamin. On an average, a total of 2000 mg. was needed. The previously sore and inflamed gums became normal after approximately four days treatment. The treatment should be followed by a maintenance dose. *H. G. Campbell and R. P. Cook. Brit. Med. J., p. 360, 1941.*

STABILIZING ASCORBIC ACID

Water-soluble edible colloids such as albumin, blood albumin, acacia, raw milk, gelatin or starch are used as stabilizers of solutions of ascorbic acid for incorporation with foods. *Wm. H. Engels, John Weijlard and Remsen T. Schenck, U. S. Pat. 2,232,699.*

SUN TAN

Recent evidence (*Science*, Aug. 28) suggests that suntanned skin does not sunburn because of a thickening of the corneum, which consists of layers of flattened horny skin cells on the outer surface. Thus upon exposure to the sun, a person gets "thick skinned" on this outer surface, and is protected from the burning rays. This theory is backed up by experiments with albino mice which cannot form the color pigment. When exposed to the sun, the mice also become resistant to burn, Dr. Harold F. Blum and Dr. John S. Kirby-Smith, of the National Cancer Institute report. *Science News Letter, September 5, 1942.*

LOUSE REPELLENT

According to the *National Zeitung*, Berne, July 16, reports are that German soldiers fighting in Russia are now being smeared with a preparation to protect them against lice. The preventive is the outcome of experiments made by Hitler's doctor, Professor Morell, who found that lice placed on horses fell off dead. He discovered that the reason was horse perspiration. The anti-lice mixture, which is also said to possess frost protective qualities, has reduced the number of cases of typhus among the German troops, the paper adds.

Perfumers Shelf

KENYA OIL

An account is given of the cultivation of this Australian tree in the Great Rift Valley in Kenya. The leaves and twigs yielded 1.2 to 1.7 per cent. of volatile oil, yellowish in color and possessing an odor of the lemon type. It was found that the leaves could be dried and stored with little loss of oil but the effect of drying on the aldehyde content was not determined. The oil had similar constants to those of an Australian oil recorded by Penfold except for the solubility in 70 per cent. alcohol, which was in 3.1 vols. for the Kenya oil and in 1 to 1.2 vols. for the Australian. Aldehydes as citral and citronellal (B.P. method), 80.5 per cent. Reports from three firms in the United Kingdom indicate that this oil is unlikely to command a higher price than Java citronella or Cochin lemongrass oils, and that it could not be employed usefully as a source of citral or citronellal as these constituents are more readily extracted from citronella or lemongrass oils, in which they occur separately *Bull. Imp. Inst. vol. 40, p. 1.*

SENNA SEED OIL

Senna pods which had been exhausted with water were inadvertently left for several days in a percolator before being emptied out, when it was noticed that they seemed to be slightly oily. Some of these pods were therefore macerated in water in a glass jar for a week, by which time they were very much decomposed, but a thin film of oil was observed on the surface of the water. As no reference could be found to oil as a constituent of senna pods it was decided to investigate the matter further.

Some Alexandrian pods were well broken up and the seeds carefully separated, ground, and put through a 20 sieve. Five grammes exhausted with light petroleum in a Soxhlet extractor gave 3.6 per cent. of a dark greenish colored oil. This oil was found to be soluble in carbon tetrachloride, and it was decided to extract a larger quantity of seeds using this solvent.

One pound of the powdered seeds was macerated for three days with 80 fl. oz. of solvent, this was filtered off, and the seeds again macerated with a further 80 fl. oz. The bulk of the solvent from the combined filtrates was removed by distillation, and finally by heating in an open dish on a hot plate. The oil extracted represented 3.1 per cent. It was soluble in ether, chloroform, carbon tetrachloride, and partly in absolute alcohol, which removed the color.

The following were determined: Specific gravity, 0.921; acid value, 12.0; saponification value, 180.9; iodine value, 75. *Pharm. J.*

TERPENE CHEMICALS

Pine oil is at present the commercial source of its main constituents. The tertiary alcohols are separated either as the α-terpineol or as the mixed alpha and other isomeric terpineols which have the fine floral essence that makes it of special value as a perfume base. α-Terpineol can be obtained by fractional crystallization (melting point, 35° C.), but to obtain commercially the perfume grade known as β-terpineol, the operation involves the complete hydration of the tertiary alcohol naturally present in the pine oil under carefully controlled conditions.

The portion unaffected by hydration, which has been steam-distilled from the terpineol, is then treated with concentrated caustic at temperature conditions that will isomerize the phenol ether, methylchavicol, to its useful isomer, anethole. The boiling point of the ether is so near that of some of the alcohols it cannot be isolated by fractional distillation, but its isomer, anethole, boils about 18° C. higher and can, therefore, be easily separated in that way. The crude anethole is chemically treated to ensure the absence of phenols and is then redistilled under high vacuum to give the refined product. The aromatic chemical, anethole, has an extremely sweet licorice taste and is widely used as a flavor in confections and also in chewing tobacco.

The treatment so far described has in no way injured the two remaining components of the original pine oil that are of any commercial importance. These are the secondary alcohols, fenchol and borneol, which have now been recovered as a cut in the fractional distillation of anethole. They are, however, of value only as potential sources of their corresponding ketones. The next step in the process is their oxidation which is carried out as a liquid-phase atmospheric-pressure catalytic dehydrogenation. This is accomplished by boiling the oil under reflux with about 2 per cent. by weight of nickel, or copper carbonate, or a mixture of the two for several hours.

The reaction must be and is 100 per cent. of theoretical, since the secondary alcohols cannot be separated from the ketones by distillation. After the hydrogen is removed, the oil is distilled again under high vacuum, and pure fenchone is separated as the lower boiling fraction. The camphor cut may be somewhat less pure, as camphor is readily and finally purified to its U. S. P. specification melting point by fractional crystallization from alcohol. The cam-

phor produced in this way from pine oil has a positive optical rotation, while synthetic camphor from pinene is optically inactive. The most probable cause of this difference is the presence of some natural camphor in pine oil which is recovered unchanged with the camphor synthesized from the borneol. The latest edition of the U. S. Pharmacopoeia modified its definition of synthetic camphor over earlier volumes as regards the optical properties because of this peculiarity of camphor derived from pine oil. *R. C. Palmer, Ind. Eng. Chem. vol. 34, p. 1028.*

AUSTRALIAN AGAR

The red seaweed, *Gracilaria confervoides*, is used as a source of agar. The seaweed is shaken free from sand by washing at the water's edge and is hung on hurdles to dry and bleach in the sun, rain and air. The dried weed should contain not more than 5 per cent. of sand and 20 per cent. of moisture. It is washed for two to four days in running fresh water, and boiled in wire baskets at 230° to 240° F. Three boilings are made altogether, using liquor from the third for the second and of the second for the first, and so on. Liquor from the first vat is filtered at 212° F., allowed to set, cut into strips about ¼ in. section, laid on trays and frozen. Media made from this agar are as suitable as media made from Japanese agar for the growth of most bacteria, but the agar has rather less jelling power. *Bull. Imp. Inst. vol. 39, p. 359.*

PREPARING TINCTURES

The maceration procedure is used for the preparation of many tinctures but there is no uniformity among pharmacopoeias as to the time of maceration nor is any statement made as to the manner of shaking. The authors undertook a study of the preparation of tincture of cinchona by variations of the maceration method using different menstrua. Cinchona bark assaying 7.4% alkaloids was used as a coarse powder. A tincture prepared by 10-day maceration with dilute alcohol assayed 1.25% alkaloids. Tinctures were also prepared by maceration with continuous agitation for varying periods of time. In all cases, tinctures prepared by continuous shaking for 15 min. met the requirements of the Swiss Pharmacopoeia V, the German Pharmacopoeia VI and the Turkish Pharmacopoeia II. The addition of hydrochloric acid to the alcoholic menstrua resulted in better yields of alkaloids. Formic and phosphoric acids when added to the alcohol showed no advantages over hydrochloric acid. The addition of citric acid to the alcoholic menstrua yielded tinctures with an alkaloidal content only slightly lower than those made using hydrochloric acid. Maceration with shaking for ½ hr. using 70% alcohol produced a tincture equal in potency to that prepared by 10-day maceration. It is shown therefore that tincture of cinchona can be satisfactorily prepared on a small scale in such short periods as ¼ to ½ hr. Whether this procedure of "shaking maceration" can be extended to the preparation of other tinctures will be the subject of future papers. *L. Rosenthaler and O. N. Jalcindag, Pharm. Acta. Helv. vol. 16, p. 149.*

FAT ANTIOXIDANT

Chemists have been at work on the problem of keeping oily and fatty foods from spoiling. The problem is basically one of keeping oxygen away from the fats, because they become rancid by oxidizing. A good anti-oxidant has been found by Dr. H. S. Mitchell and Dr. H. C. Black of Swift and Company's research laboratories, in a well-known product of tropical American trees, gum guaiac. Two years of large-scale testing have shown it to be highly successful in the preservation of lard and on wrappings for other oily foods. *Science News Letter, Sept. 19, 1942.*

CASTOR OIL PLASTIC

One part castor oil to one part ethyl cellulose is the composition of the new plastic recently announced by the Hercules Powder Company to replace rubber in many of its uses.

The new material has not the bounce of natural rubber, but there are many things for which rubber has been used which do not need bounce, such as washers, gaskets, gloves, galoshes, garden hose, etc. Sixty thousand pounds of rubber have been used in these ways annually, it is estimated, simply because it was cheap and plentiful. For all of them the new plastic is just as good, and in some ways better, they say. *Science News Letter, September 5, 1942.*

SKIN FREEZING

Although very accurate determinations of the living skin's freezing-point have never been made, this point is not far from –0.53° C. When skin is cooled, however, it very rarely freezes at its true freezing-point. It exhibits in very remarkable degree the property called supercooling. Because of this property it is unusual for the skin to freeze unless its surface temperature is reduced below –5° C., and it often happens that this temperature is lowered to as much as –20°, without the occurrence of freezing. Freezing begins with difficulty, but once started it spreads rapidly throughout all the chilled tissue.

The supercooling is a very important protection against freezing and the injurious effect that would arise out of this physical change. It has been found that supercooling displays itself in greater degree in skin that remains unwashed. Washing the skin encourages, while rubbing the skin with spirit and anointing it with oil discourages, freezing. The capacity to supercool greatly would seem to be connected with relative dryness of the horny layers of the skin.

It should be recognized that between the lesions following freezing and those following heat there is no fundamental distinction. They are not properly regarded as reactions to frost or to heat, but to tissue injury. It follows that the rational treatment of the lesions of frost-bite and scald have much in common. A guide to the treatment of lesions following frost-bite is that they should be dealt with in the same way as are similar lesions resulting from heat, in respect of the treatment of which we possess much recent experience.—*T. Lewis, Brit. Med. J. vol. 2, p. 869. 1941.*

AMPHETAMINE FOR ALCOHOLISM

Bloomberg administered amphetamine sulfate as an adjunct in the treatment of 56 patients with chronic alcoholism. This therapy effectively combated the depression and general malaise of the acute "hangover" and continued to combat these symptoms throughout the weeks of readjustment following the total withdrawal of alcohol. The amphetamine sulfate was as effective as alcohol in overcoming the depression and jitters of the hangover. It made it possible for the patient to stop drinking with no consequent great discomfort.

XYLYLMETHYLCARBINAMINE

Compounds suitable for producing therapeutic effects by their action on the central and sympathetic nervous systems, and which may be used in the form of the bases of their various salts, include *a*, *o*-, *-m*- and *-p*-xylylmethyl carbinamines, and the corresponding *N*-methyl compounds, and may be produced from corresponding ketones by a process involving the Leuckart synthesis.—*Fred P. Nabenhauer, assignor to Smith, Kline & French Labs. U. S. pat. 2,246,529, June 24, 1941.*

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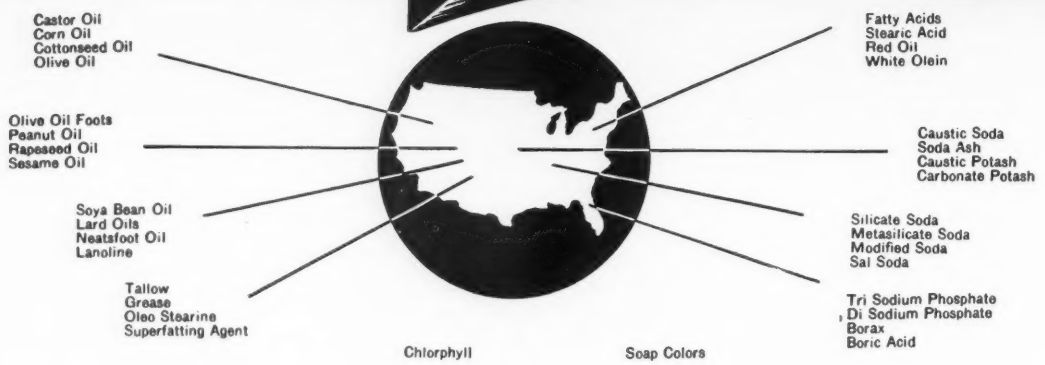

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ADVANCING THERAPY

BLOOD PRESSURE REDUCTION

A derivative of adrenalin which can be prepared synthetically in the laboratory in unlimited amounts has been discovered to be highly effective in reducing high blood pressure in animals, it was reported before the semi-annual meeting of the American Chemical Society.

The report of a new advance was presented by Dr. K. A. Oster, physician, and Dr. Harry Sobotka, chemist, of the Mount Sinai Hospital in New York City.

The synthetic substance, known as adrenochrome, it was reported, has been found to be non-toxic when given to animals. It was given to rats in doses as high as 100 milligrams and to dogs in doses twice as high. In all cases the high blood pressure in these animals was reduced to normal in a few hours, and remained normal as long as the chemical was provided at the proper intervals, the Mount Sinai scientists reported.

It was emphasized, however, that no trials on human being with high blood pressure had been made and, furthermore, that no conclusions as to the possible applicability of the chemical to human cases would be justified at present.

The chemical in its present form, it was found, is rather unstable, losing its activity as an antipressor substance within a week. Efforts are now being made to produce it in a form which would be more stable, Drs. Oster and Sobotka stated.

Adrenalin is converted into adrenochrome, the blood-pressure-lowering substance, by oxidation, in the course of which four hydrogen atoms are removed from its molecules. The new substance belongs to a large chemical family known as ortho-quinones.

Adrenochrome was first prepared in England about five years ago. Not until the Mount Sinai Hospital investigators began their tests, however, did its properties as a reducer of high blood-pressure become known. Oddly enough, the substance will not reduce the blood-pressure in normal animals.

The adrenochrome is a dark brown powder insoluble in water, and must be kept in the absence of air. It is injected intramuscularly in rats and intravenously in dogs in a suspension of olive oil or propylene glycol.

DETERGENTS FOR ULCERS

A new ten-day cure for stomach ulcers has just been developed by two Northwestern University doctors.

In 1936 Dr. H. B. Bull found by chance that sodium lauryl sulfate denatures the molecules of egg albumen. He reasoned that it might also inactivate the powerful digestive juice, pepsin. Pepsin is a protein much like egg albumen. It causes ulcers by digesting the lining of nervous stomachs and duodenums as well as food. The treatment worked.

Next Dr. S. J. Fogelson developed a method of prescribing sodium laurylsulfate in small, tasteless capsules to be taken after meals. The treatment works best, the doctor found, when the patient goes on the usual bland diet, but this is not necessary. Clinical results, said Dr. Bull last week, have been "splendid—no relapses, no recurrences, no bad effects."

OINTMENT BASES

Recipes for ointment bases, in which economy in the use of fats is effected, are reviewed. A satisfactory base may be made from glyceryl monostearate, 12; liquid paraffin, 2; glycerin, 3; spermaceti, 5; nipagin, 0.1; water to 100. An economical lanolin can be prepared by incorporating 22 parts of water into a mixture of 20 parts of wool fat and 3 parts of liquid paraffin. Dermazym, a paste-like preparation of washed yeast, contains 56 per cent. of water and 22 per cent. of protein; it may be used in the preparation of oil-in-water emulsion bases containing 10 per cent. of fatty material or for aqueous ointments such as salicylic acid, 5; alcohol, 10; dermazym, 85. Pectin bases are suitable for use with a number of drugs. For substances in solution, pectin is triturated with 1 to 1.5 parts of alcohol and the aqueous solution is incorporated with the aid of heat. Insoluble solids are triturated with the mixture of pectin and alcohol and 10 to 15 per cent. of glycerin as in the following preparation:—pectin, 5; zinc oxide, 15; talc, 15; glycerin, 15; water to 100. A 10 per cent. mucilage of methyl cellulose is recommended for the following bases which are suitable for most purposes:—(1) methyl cellulose mucilage, 100; wool fat, 100; liquid paraffin, 150, water to 1000; (2) stearic acid, 15; triethanolamine, 8; methyl cellulose mucilage, 20; water to 100; (3) stearic acid, 5; triethanolamine, 2.5; equal parts of liquid paraffin and methyl cellulose mucilage to 100. *H. Muhlemann, Schweiz. Apoth. Ztg., vol. 27, p. 360.*

HORMONES AND PRURITUS

Feldman and his collaborators used estrogen and androgen for treating senile vulvovaginitis, leukoplakia and kraurosis vulvae and their accompanying pruritus in 16 patients. The first 12 who have been treated long enough for the results to be convincing have ob-

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tained uniformly good results; the other 4 will no doubt also have a completely favorable response. Several considerations impelled the authors to treat senile pruritus in the female with testosterone propionate and in the male with estrogens. To guard against error in estimating the authenticity of the effect of the endocrine substances on senile pruritus, several patients whose itching returned after an intermission in the endocrine medication were given injections of sesame oil or 1 per cent. solution of procaine hydrochloride. During this control therapy the itching in each remained stationary or increased in intensity. This treatment of senile pruritus cannot be regarded as a cure. The method exerts a maintenance effect on persons with an endocrine deficiency. There is apparently no ill effect from the medication except for the local effect of estrogens on the female sex organs; uterine bleeding and painful nipples. This can be counteracted by combining an estrogen with an androgen (testosterone propionate). *Arch. Derm. & Syphil. vol. 46, p. 112.*

FUNGUS GERMICIDE

From a fungus or mold living in the earth and from a fungus in stable manure, two new germ-stopping chemicals have been isolated by Dr. Selman A. Waksman, Dr. Elizabeth S. Horning and Dr. Ernest L. Spencer, of the New Jersey Agricultural Experiment Station and Rutgers University.

The earth fungus chemical is called fumigacin and can be obtained in long, fine needle shaped crystals. The manure fungus chemical is called clavacin. It is particularly active against gram-negative bacteria. Important characteristic of clavacin is its ability not merely to check the growth of bacteria or germs, as other germ chemicals do, but also to kill the bacteria.

ATHLETE'S FOOT OINTMENT

Lt. S. J. Taylor, Jr., M.D., reports excellent results in the treatment of epidermatophytosis with an ointment of the following formula, which he calls S.S. Ointment:

Salicylic acid	350.
Precipitated Sulfur	300.
Petrolatum	2000.
Cornstarch *q. s.*	

The salicylic acid and the sulfur are mixed well with the petrolatum, either yellow or white. To the resultant mixture a sufficient quantity of cornstarch is added—about 200 to 250 Gm.

BACTERIOPHAGE TREATMENT

From the data on 500 cases of staphylococcemia MacNeal and his associates conclude that staphylococcic infection occurs at all seasons with little variation. The staphylococci isolated from the blood stream are generally susceptible to the (in vitro) action of bacteriophages now available. Only 5 (17 per cent.) of 30 patients who did not receive bacteriophage therapy survived as compared to 18 of 25 who received bacteriophage during the metastatic stage of the disease. Of the remaining 445 patients, 137 died before the end of the third day after bacteriophage treatment was started. Of the 308 who received bacteriophage earlier, 142 (46 per cent.) survived. Of the total 470 patients who received bacteriophage therapy, 160 (34 per cent.) survived. Bacteriophage in conjunction with other agents, particularly sulfathiazole and fractional transfusions, offers a more favorable outlook in the severe forms of staphylococcic infection. *Amer. J. Clin. Path. vol. 12, p. 281.*

CERTUNA, PLASMOCHIN, ATABRINE, QUININE

Aguliar Meza and his associates report mass treatment of malaria with atabrine and plasmochin among certain rural groups in Guatemala. Because the administration of three doses each day involved difficulties, 200 patients were hospitalized and the entire daily dose was given in one dose. The experiment demonstrated the innocuousness of a single daily dose. Studies on the gametocidal action of plasmochin and certuna (dialkylamino-oxyquinolilamidobutame) seem to indicate that the gametocidal action of certuna is similar to that of plasmochin in case of Plasmodium falciparum, but less so in the case of Plasmodium vivax. The combination of certuna and atabrine in therapeutic doses does not produce toxic effects. The results obtained indicate that treatment with plasmochin or certuna, whether alone or with quinine or atabrine, is generally satisfactory. Negative tests were obtained in 139 malaria patients treated with certuna after four days, compared with 4.95 days in 132 persons treated with plasmochin, 34 of whom also received quinine or atabrine. The campagin to control malaria has resulted in a decrease in the percentage of infected persons from 15.51 in 1938 to 8.18 in 1939 and 7.86 in 1940. *Bol. Oficina. San. Panam. vol. 21, p. 549.*

PYRIDOXINE FOR ACNE

Jolliffe and his co-workers used pyridoxine for the treatment of 37 of 72 patients with persistent adolescent acne; the remaining 35 patients were used as controls. The condition of 9 of the 37 was cleared, of 19 improved, of 6 unchanged, and 3 dropped from treatment. The respective figures for the controls were 0, 7, 19 and 9. Irrespective of the degree of improvement of the acne there was a decrease in the oiliness of the skin. Generally it took seven to ten days of continued administration of the effective dose of vitamin B_6 to obtain definite improvement. Improvement remained stationary without treatment in only 4 subjects. In the others relapses occurred when treatment was withdrawn. It is doubtful whether in the 4 the apparent improvement was due to pyridoxine. It is suggested that the physiologic function of pyridoxine is connected with utilization of the unsaturated fatty acids; pyridoxine probably functions through its corrective action on a deranged fatty acid or lipid metabolism. This suggestion would not invalidate the concept of a direct physiologic action of pyridoxine on the activity of the sebaceous apparatus of the skin and the reduction in the oiliness of the skin. *J. Invest. Dermatol. vol. 5, p. 143.*

CUTANEOUS ACIDITY

Bernstein and Herrmann measured the acidity of the skin by using the Stanscien universal indicator with a *p*H range between 1 and 11. The authors observed that the acidity on the normal skin is increased during hot days, that the skin is alkalized by washing with soap and that the reduced tendency to soap dermatitis in summer can be explained by the increase in (free) perspiration. When eczema is present the *pH* of the affected region is moderately higher than of the normal skin of the same person. This difference remains for some time after an apparent cure. Hyperhidrosis shows *p*H values that are either normal or on the acid side. These persist on hyperhidrotic, inflammatory areas. Dyshidrosis is characterized by a lack of acidity. The figures for intertriginous mycosis are similar to those for eczema. The presence of fungi may be indicated by finding an "inner" area of a lower *p*H within a surrounding zone of dyshidrosis with a higher *p*H. The normal acidity is reduced when degenerative changes, myxedema and senile atrophy prevent the skin from imbibition with sweat. *N. Y. State J. Med. vol. 42, p. 436.*

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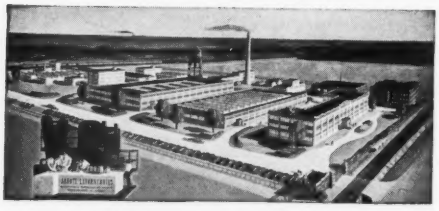

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READERS' QUESTIONS

DISCOLORED SUNTAN LOTION: Recapitulating as this latest summer season comes to an end, we find we have had far more than the usual number of returns of defective merchandise. Quite a few bottles of suntan lotion have been returned to us because they turned brown, sometimes quite dark, after being kept in the retailers' stock for a while. We tested some of these returns and found that they had lost little if any of their original sun-screening power, their color, however, is indisputably bad. We would appreciate any suggestions from you as to how we can make our lotion retain its original whiteness. Detroit.

Discoloration of lotions is not by any means a new problem and you may have to do a certain amount of checking to determine which is the offending ingredient. If you will investigate a bit you will probably find that practically all of the discolored packages were at one time or another submitted to the prolonged action of strong light, as in a window display. Triethanolamine in a cream will eventually produce enough color to make the cream off-white, especially in the presence of oleic acid (or low-grade stearic acid). Perfumes, especially in emulsions that are even slightly too alkaline, will also change color and darken the preparation. Finally, and most commonly, it is the sun-screen compound itself that may darken very substantially when exposed to light. It is known that these compounds act by absorbing active erythemic rays of the sun spectrum. This absorption, however, is an action whereby the light rays are transformed into another type of energy. This energy may be harmless to the skin but may well cause decomposition of the screening compound with consequent development of color. Although the presence of a small amount of anti-oxidant may somewhat retard the development of discoloration, the only real solution is the omission of the offending compound or compounds from the formula. If this is not considered feasible, then the lotion itself should be tinted with an approved water-soluble dye so that the later development of color will not be noticeable.

GRITTY CREAMS: Some, but not all batches of a cold cream that we make develop a most objectionable grittiness after a time. The cream feels as if it had been mixed with sand, although it rubs out quite smoothly on the skin. Have you any suggestions to offer as to the cause of this condition and how it may be corrected? Chicago.

In the first place, your formula contains altogether too much paraffin. Since this is a crystalline wax, it quite often will crystallize out of mixtures in very fine crystals that seem like sand. The exact conditions that will lead to this crystallization are not clearly predictable, so that it may not occur when expected. The amount of paraffin in the mixture may easily be cut in half without substantially affecting the properties of the cream. If, however, the cream seems too much softer than before, a little additional beeswax may be added. Another frequent cause of trouble is poor processing. It is imperative, especially where one of the components has any tendency to crystallize out, that the aqueous solution be at the same temperature, or even slightly higher, than that of the melted oils and waxes being emulsified. Otherwise the oily melt is chilled slightly, enough to promote precipitation of crystalline paraffin.

BUFFERED DEODORANT: I understand that certain compounds can be added to aluminum chloride or aluminum sulfate deodorant liquids and creams to make them more stable and less destructive to clothing. Can you give me any information about these compounds and how they work? Denver.

Aluminum salts, such as the chloride or sulfate, are salts of a very weak base and a strong acid. In the presence of water, compounds of this nature undergo a change called hydrolysis, in which aluminum hydroxide is liberated in colloidal form, and the acid is set free. This free acid is responsible for breakdown of creams and deterioration of fabric. Since hydrolysis

INDEX
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always takes place with aluminum compounds in water, the acid must be neutralized or modified in some way to lessen its activity. Complete neutralization is not advisable, since this will result in complete precipitation of the aluminum hydroxide. Organic acids are for the most part weak acids and at any rate do not attack fabrics. Aluminum acetate, acetotartrate, sulfocarbolate, citrate, etc. have been suggested for use in place of the sulfate or chloride, but have one disadvantage or another. On the other hand, if sodium sulfocarbolate is added in small quantities to an aluminum chloride solution, the liberated hydrochloric acid will react to form sodium chloride, liberating sulfocarbolic acid. This remains free in solution in place of the strong mineral acid, and prevents precipitation of the aluminum hydroxide, but is in itself harmless. A similar effect is possible with the addition of urea, an extremely weak base. This forms a loose combination with the free mineral acid, preventing harm to fabric or breakdown of creams, but leaving acid still available if necessary to prevent precipitation of the aluminum hydroxide. Other weak bases or salts of organic acids may be used in this same way, always keeping in mind the requirements that the addition must itself be non-irritating, harmless to fabrics, odorless, and as cheap as possible. Even with these buffering agents present, it is still not advisable to attempt to formulate an antiperspirant cream based upon an ordinary vanishing cream formula stable only in the presence of alkalies. These will be broken down even by the reduced acidity of the mixture, so that an acid stable emulsifier is required.

PROTECTIVE CREAMS: I have read with considerable interest recent articles on skin protective creams and I am very much interested in marketing a product of this type. I believe certain of my ideas may result in preparations of special value in protecting against specific irritants. However, I am bothered by the recent cosmetic limitation order, especially as it refers to new products and flatly prohibits their introduction. Are protective creams for prevention of industrial dermatitis cosmetics and is the production of new products in this class forbidden? New York.

Only the proper department in the War Production Board can give you an authoritative ruling on this and other questions involving the limitation order. You can be sure that the question will be given sympathetic and intelligent consideration, especially if interference with the war effort is not involved. Nevertheless, it is possible for us to venture a few observations. In the first place, according to the Food, Drug, and Cosmetic Act, "The term 'cosmetic' means (1) articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and (2) articles intended for use as a component of any such articles." It does not seem to us that protective creams, to protect skin surfaces from the action of industrial irritants, come under this definition at all. Furthermore, there is little question but that preparations of this type do promote the efficiency of industrial workers. At best they completely prevent occupational dermatitis; if properly compounded they surely reduce the action of chemicals on the hands; at worst, the creams make it easier for the workmen and workwomen to do a thorough washing job at the end of the shift.

CAKE MASCARA: Have you available any formulas for the manufacture of a cake mascara that will not cause smarting when it accidentally gets in the eyes. Lima, Peru.

The following formulas are modifications of the usual type of cake mascara which was originally composed of lampblack and soap, along with water. The absence of the strong alkali in soap does away with eye irritation.

Triethanolamine stearate	40
Paraffin	30
Beeswax	12
Lanolin	5
Lampblack	13

Or—

Glyceryl monostearate	60
Paraffin	15
Carnauba wax	7
Lanolin	8
Lampblack	10

Melt, mix, and mill the ingredients, then cast or extrude to the proper form.

The soap in the original formulas is generally being displaced by more nearly neutral emulsifiers, such as triethanolamine stearate, glyceryl monostearate, etc. Carnauba wax is said to impart luster to the eyelashes, but too much will make a brittle cake. Lanolin makes the mascara more homogeneous and adherent.

In making mascaras in other colors than black, take extreme care to select only completely inert colors to avoid possible injury to the eyes.

ODORLESS DEPILATORY: I am interested in obtaining as much information as possible on the formulation of the newer type of odorless depilatories. Those I have tested have been remarkably free from unpleasant odor, have caused little irritation, and have been quite effective. Can you tell me anything about the active ingredients and the combinations used in the paste? Chicago.

Several years ago, when a patent on the subject first appeared, many investigators checked on the merits of sodium stannite pastes as odorless depilatories. Their results can be judged from the fact that we know of no stannite depilatory actually on the market. Indications are that the composition could not be properly stabilized for cosmetic use. The preparations you examined were undoubtedly based upon thioglycollic acid. The use of this compound, like sodium stannite, seems to have originated from studies conducted by leather chemists on the mechanism of unhairing of hides. According to their investigations, destruction of hair results from the reduction of sulfur linkage in the hair in the presence of alkali. Relatively high pH ranges, generally over 10, are required. If the pH is too high, however, the skin will be attacked with consequent irritation. Thioglycollic acid, or rather calcium thioglycollate, has very little odor, is a powerful enough reducing agent, and seems to be active in a somewhat lower pH range than inorganic sulfides. For this reason it has less effect on the skin itself. A wide range of inert or slightly alkaline fillers are used along with the active ingredient, and methyl cellulose can be used for binding the paste.

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PURCHASING DEPARTMENT

SEPTEMBER MOVEMENTS

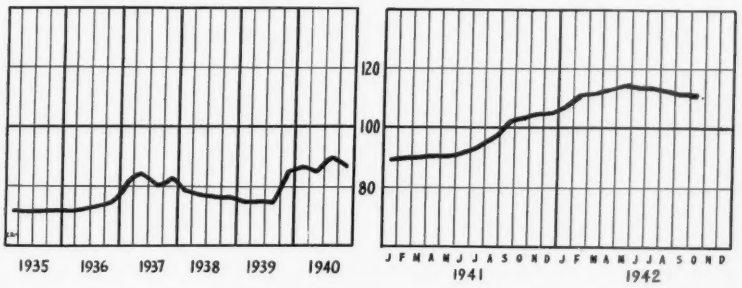
Up

Chamomile Flowers 5c	Rhubarb root HD 10c	None

Down

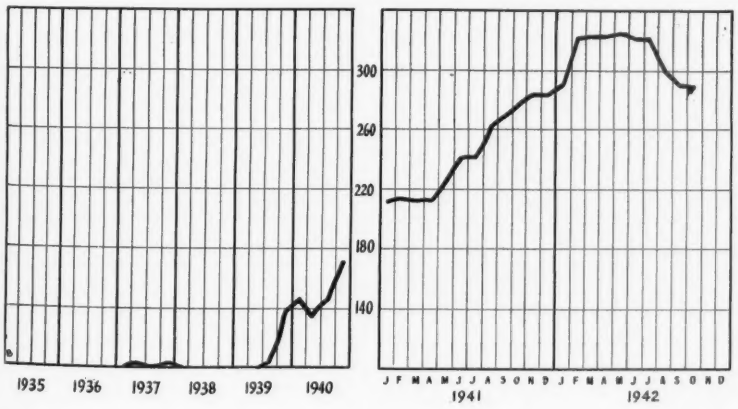
Almond oil sweet 15c	Eucalyptol 45c	Plantago seed 1c
Anise oil USP 25c	Eucalyptus oil 5c	Saffron Amer. 5c
Arabic cum sorts 3c	Ginger oil $2	Senega root 2c
Belladonna leaves 25c	Hydroxycitronellal $1	Styrax 15c
Benzophenone 5c	Jalap root 17c	Valerian root 45c
Bois de rose Braz. 50c	Lemon grass oil $1.15	Vetivert oil Java $4
Cananga oil, native $1.50	Lime oil dist. $1	Wormseed oil 10c
Rectified 75c	Linalool 15c	Wormwood oil 15c
Citral $1.50	Methyl benzoate 40c	
Dill oil 50c	Patchouli oil $1.50	

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index remained without change at 111.1. This was the first month since these indexes to price trends were compiled that this group failed to show some fluctuation. Menthol now seems to have become stabilized in price. It might be recalled that this item has always been more or less of a wildcat as far as price trends were concerned.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index declined to 288.5 from the previous 290.0. Rhubarb root high dried advanced 10 cents a pound to $1.20 but this was more than offset by the decline in belladonna from the previous $2.10 level to $1.85. These were the only changes noted in the botanical group making up the index. On the whole the market reflected general conditions throughout the trading period under review.

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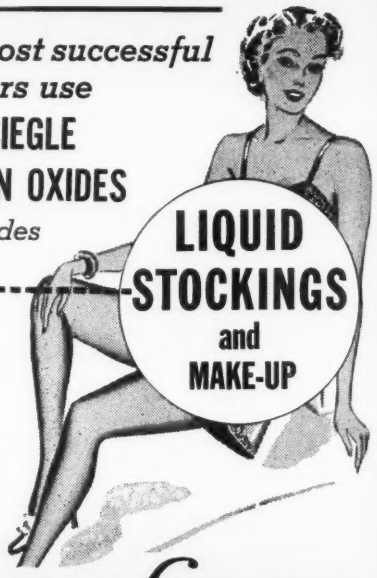

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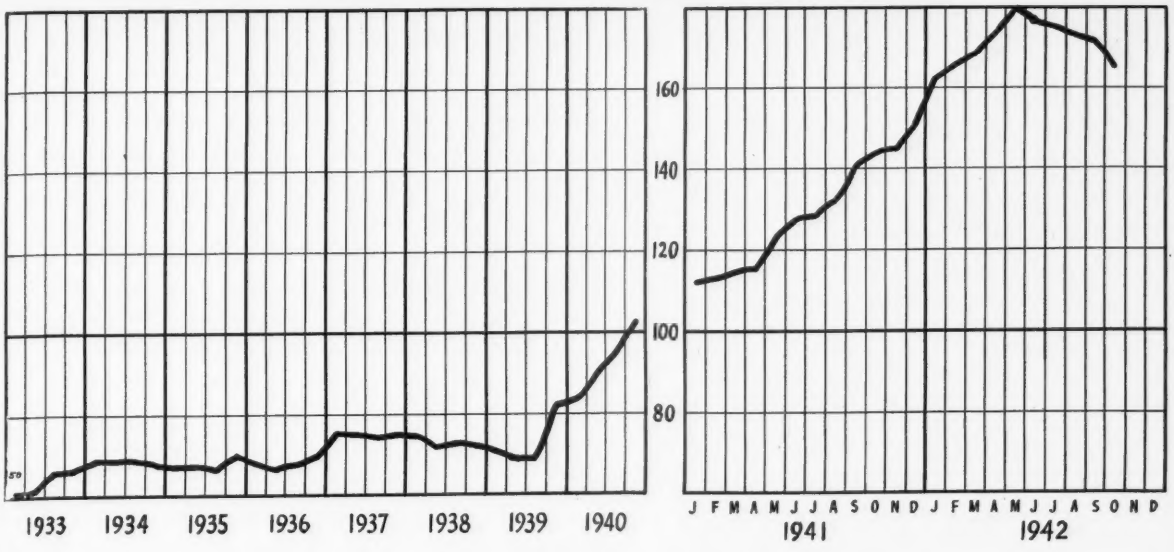
50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for September, 1942 declined to 164.6 from the previous 172.1. Markets as a whole were comparatively quiet during the period under review, this being particularly true of essential oils. Dealers considered this condition due to price ceilings and government control of inventories. Of particular interest was the specific price ceilings established for mint oils, vanilla beans, and the conservation order on theobromine and caffeine.

• Prices quoted in this section were current on the first of this month.

ESSENTIAL OILS

The essential oil market as a whole has experienced a period of small demand during the past month especially in comparison to activity since the outbreak of the war. This is attributed to the establishment of price ceilings and particularly to the regulations controling inventories.

Dealer inventories on many items must of necessity be made to last as long as possible. Of course there has been no imports of bergamot from Italy, nor has oil of orris, oleoresin orris or Italian lemon oil been traded in the spot market.

While there has been no general change in the trend of products formerly received from France it is rumored in the trade that some flower oils are on the high seas destined for New York. This material may have been shipped long ago but there is no development in the shipping situation which would indicate that this market is likely to receive lavender, lavandin, geranium, etc. from France or French colonies with any regularity in the foreseeable future.

Citronella Java is quoted lower at $2.25 per pound and vetivert oil has declined to $37.50. A good grade of patchouli oil is said to be available at $6.50 a pound. Spice oils as a whole are firm and expected to maintain a good price level.

Lemon grass oil has probably shown the most decided downward trend of all the essential oils quoted during the past month. On spot this oil is quoted at $1.50 per pound with reports that shipment prices from India are considerably lower. While lemongrass oil can be said to be the most important item received from the British Empire, a very good grade is now available from Florida at favorable prices.

Anise and cassia oils from China are not freely offered in the spot market but when available are slightly lower in price. Menthol is strong.

For the most part oils from South and Central America are weak. This is particularly true of bois de rose which sold up to $6.50 a pound not long ago but is now obtainable on spot at $4.50. A fair amount of South American oils have arrived in this market particularly safrol and safrol-containing oils.

ASCORBIC ACID

Leading manufacturers of ascorbic acid (vitamin C) announced that increased production has enabled them to reduce prices to manufacturers 25c per ounce. As of September 18th the following schedule of prices prevailed: 1 oz. bottle $1.45 per oz.; 5 oz. bottle $1.37 per oz.; 25 oz. bottle $1.32 per oz.; 50 oz. bottle $1.29 per oz.; 100 oz. drum $1.27 per oz.

FATS AND OILS

The Director of the Census released the following preliminary statistics of the factory production and consumption of certain fats and oils. Factory production, consumption and factory and warehouse stocks as of July 31 in order of quotation: Olive oil, edible none, 137,000 lbs., 7,092,000 lbs. Cod liver oil, 74,000 lbs., 443,000 lbs., 6,057,000 lbs. Stearic acid, 3,897,000 lbs., 1,766,000 lbs., 10,301,000 lbs. (includes 3,024,000 pounds in hands of producers). Glycerin, chemically pure, 5,973,000 lbs., 2,131,000 lbs., 33,548,000 lbs.

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MINT OILS

Comparable prices for peppermint oil, spearmint oil, tung nuts, soybeans, peanuts for oil and 13 other agricultural commodities were announced September 23 by Secretary of Agriculture, Claude R. Wickard. A parity price for lemons was also issued. For peppermint oil, the Secretary found that the comparable price on August 15 was $3.10 per pound, and that this was the average price of the oil received by farmers in the 1941-42 season. For spearmint oil the comparable price August 15 was $2.28 per pound, the average price for the season was $2 per pound.

For tung nuts the August 15 comparable price was $64.04 per ton, the average price for the season was $87.50 and the comparable base price was $42.13. The comparable base price of peanuts for oil was the same as that announced by the Secretary on January 16—$2.35 per pound. The comparable price on August 15 was $3.57 and the average price received for the season 1941-42 was $4.

The Secretary set the prices on the basis of testimony given at a hearing in St. Louis from August 24 to 28, and acted under provisions of the price control act which direct the Secretary to determine comparable prices for other than the basic crops, which in turn serve as a guide to the Office of Price Administration in fixing ceilings on farm products and also have a direct bearing upon the rate of loan made by the Commodity Credit Corporation to growers of crops being expanded in production to satisfy lend-lease needs.

The price control act provides that comparable prices shall be considered and used in the same manner as parity prices and shall be so determined as to give the producers of the commodities concerned a price comparable with the parity prices of the basic crops specified. In other words, the OPA in establishing ceilings on prices of farm products for which comparable prices have been determined, must be guided by the same standards applying to products for which parity prices have been determined—ceilings at not less than 110 per cent. of parity or the comparable price.

Unless the law is changed in the manner being sought by the administration, ceiling prices could not be established under the present law formula at less than $3.41 a pound for peppermint oil, $2.50 a pound for spearmint oil and $70.44 a ton for tung nuts.

OLIVE OIL

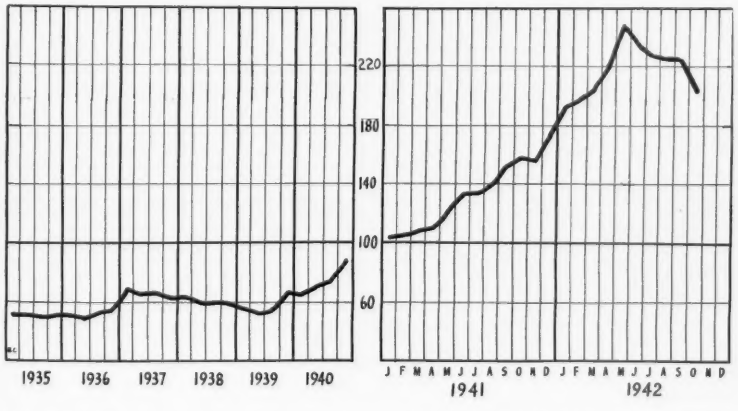
A corporation to stimulate the cultivation of olives, to be called Corporacion Nacional de Olivicultura, was created by the Argentine Government by decree issued on June 24, 1942. The new organization will undertake the production and sale of olives at economic prices, assist producers, elaborate olive oil by setting up local factories, and arrange for the marketing of the oil abroad.

EUCALYPTUS OIL

While Australian eucalyptus oil is not one of the items which have become critically scarce in the spot market, the shipping situation in the South Pacific is sufficiently precarious to warrant interests looking toward other possible sources of supply.

We recently had the pleasure of interviewing a producer of eucalyptus oil from Colombia. Analysis of this oil is

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oil index declined to 202.4 from the previous 225.1. Anise was lower at $2.95 from the previous $3.20; bois de Rose dropped 50 cents a pound to $4.50; cananga oil was sharply lower at $15.50; eucalyptus oil declined 5 cents a pound to $1 and geranium oil was also much easier at $17.50. As stated elsewhere, this market was said to sharply reflect government control of inventories and prices.

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said to compare quite favorably with the Australian product. At a later date we expect to have more detailed information on this source of supply together with analytical data.

The largest eucalyptus tree plantations in Brazil are found in the State of Sao Paulo and this state is also the center of eucalyptus oil production. Begun in 1937, the industry has not gone beyond the experimental stage. Of the 100,000,000 eucalyptus trees in Sao Paulo, only 1,000,000 are of a type suitable for distillation of the oil.

Unfortunately for the essential oil industry, the tall eucalyptus tree is valued in Brazil chiefly for its use as a fuel and in construction. Usually leaves from felled trees are removed for distillation, with little regard for the age of the tree, selection or maturity of the leaves, time of year, or weather conditions. The resultant oils, therefore, lack uniformity.

Best samples of eucalyptus oil have come from the State of Santa Catarina, some of which were distilled from Eucalyptus globulus and approached the Australian type of oil.

MADAGASCAR

Several months ago, when British forces seized the important naval base of Diego Suarez on the northern tip of Madagascar, Dr. Ernest S. Guenther, Chief Research Chemist of Fritzsche Brothers, Inc., called the trade's attention to the possible advantages to the entire industry should the Allies exert complete domination over this richly productive French possession. At that time, however, the Allied forces were apparently content with their acquisition of a valuable naval base and the expected benefits of additional raw material exports from the island proper did not materialize.

Now, however, the Allied offensive has been resumed, this time with evident intention of gaining the hoped for domination of at least a substantial part of Madagascar. While such occupation would be for strategic reasons and not for exploitation, Great Britain having pledged return of the Island to France after the war, still virtual control of its productive facilities would be in Allied hands, and at their discretion, present restrictions on the sale of the Island's output could be lifted to accommodate friendly nations in need of Madagascar's raw materials.

It seems not unlikely, therefore, according to Dr. Guenther, that this country's users of flavoring and perfume materials may yet benefit by the offensive action now in progress on this fourth largest of the world's great islands. The likelihood of Madagascar's ylang ylang, lemongrass, palmarosa, champaca, clove and vanilla again reaching American markets may soon hinge upon the effectiveness of naval protection in bringing these cargoes to our shores.

SHARK LIVER OIL

Shark fishing off the South Florida East Coast has been catapulted from a more or less despised calling to a vital defense industry. The reason is the urgent demand for shark liver oil, which is particularly rich in vitamins A and D. Shark liver oil must be depended upon to some extent to replace cod liver oil now no longer obtainable in Norway and England.

Salerno, on Manatee Creek, up St. Lucie River, is the center of the revived and now flourishing shark industry. The sharks are caught on mile-long chain trot lines, baited with chunks of coarse fish every 25 feet, set on the edge of the Gulf Stream bottom and left overnight. The ends of the line are anchored and marked with buoys. Hauled to the surface the next morning by winches, the sharks are clubbed, brought to port and flayed. The livers are boiled for the oil, which is barrelled and shipped to northern extracting plants. A shark's liver produces anywhere from two to 25 gallons of oil.

Varieties of shark plentiful five miles off St. Lucie Inlet include the nurse shark, hammerhead, tiger shark, leopard shark, lemon shark, mackerel shark and the great white shark. Sharks weighing up to and over 1,500 pounds have been caught by the Salerno commercial fishermen. The average length is seven feet.

PETITGRAIN OIL

Heavy demand for petitgrain boosted Paraguay's 1941 output to an all-time high. Shipments rose from 164,407 kilograms in 1940 to 199,487 kilograms in 1941. These figures represent production, since no petitgrain is used locally. While Argentina took a small percentage of 1941 production, the bulk of the crop went to the United States.

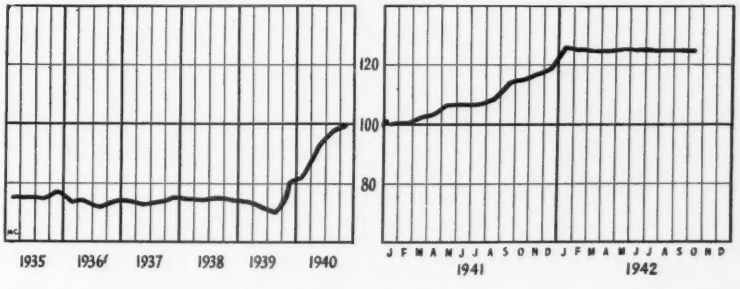
Until better methods of collection and distillation are inaugurated, the 1941 petitgrain yield may be regarded as the peak.

VANILLA BEANS

Specific dollars and cents price ceilings were established by the Office of Price Administration on all vanilla beans, reducing March ceiling prices about 27 per cent. Amendment No. 35 to Supplementary Regulation No. 14 of the General Maximum Price Regulation, effective September 30, 1942, sets a specific maximum selling price of $11 per pound for prime (superior to extra quality) Mexican whole vanilla beans f.o.b. New York or Philadelphia and a $10 ceiling price for Bourbons, as beans from Madagascar are known in the trade. Maximum prices are also established for grades lower than first quality.

The medicinal chemicals index again remained without change at 124.4. This is the third consecutive month during which the group of raw materials making up this index failed to show any price fluctuations. While a good volume of business is passing in this particular group manufacturing consumers have welcomed the stability which has come to this market.

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



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